UK MET OFFICE
GLOBAL DATA MONITORING REPORT

January 2026

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CONTENTS

1. Introduction

2. Global Data Monitoring Statistics

3. Composite Observing Systems for the North Atlantic (COSNA)

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1. Introduction

As the WMO-appointed lead centre for monitoring surface marine data, the U.K. Meteorological Office produces monthly statistics on the quality of these observations received at RSMC Exeter. This report includes this information along with statistics for most other types of data. The figures and tables contained herein are presented according to the agreed standards for the exchange of monitoring results.

The report is based on data received at the UK Meteorological Office Headquarters, Exeter in time for inclusion into the appropriate analysis (the current cut-off time is approximately 7.2 hours after each analysis time). The evaluation of data quality is based on comparison with the appropriate 6-hour global model forecast (background) field, although to provide background values valid at the observation time for non-main hour data, time-interpolation of the T+3, T+6 and T+9 forecasts is used; and for sea surface temperature the background field is the analysis from the previous day. Generally, the background field is of high quality except in data sparse areas, tropical regions and areas close to steep orography where care should be taken in interpreting the statistics shown.

Comments or queries on the report are welcome and should be addressed to:-

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2 Global Data Monitoring Statistics

Ships, Fixed buoys, Platforms and Drifting buoys observations

TABLES 1and 2 contain lists of the stations which are considered to have returned suspect observations of pressure, windspeed, wind direction or sea surface temperature, as appropriate, during the month. The criteria for quality control are given on the header page for each table.

Figures 1 and 2 show 10 degree lat/long box average numbers of SHIP/SYNOP and DRIFTER observations received per day throughout the month at Exeter and assimilated into model runs. All data are included. Box average values are plotted as the nearest whole number (values of x.5 are rounded up). Where the average is more than 999, then 999 is plotted. A box with no observations is blank. If the 24 hour average >0 but <0.5, then 0 is plotted.

Synop Observations

Table 3 contains a list of stations which are considered to have returned suspect observations of Pressure during the month. The criteria for quality control are given in the header page. The reporting practice of each station is included in the list of statistics.

At the UK Met. Office, we monitor SYNOP pressure after it has been interpolated to our Global NWP Model's surface height. For most synoptic stations (about 75%), the surface pressure (at the model surface) is calculated from the reported station-level pressure, or, if this is not available, the height of a standard pressure-level (e.g. 850 hPa or 700 hPa). If neither of these are available, or if the reported station-level pressure is deemed unreliable, the reported mean sea-level pressure is used (about 25% of SYNOPs).

Aircraft observations

Tables 4A (300-150 hPa) and 4B (1000-301 hPa) contain lists of statistics calculated from data received from all airline carriers.

Figures 3A (300-150 hPa) and 3B (1000-301 hPa) show 10 degree lat/long box average numbers of aircraft reports in AIREP/AMDAR code (including AIREP, ACAR, AMDAR, ASDAR and ADS) received per day throughout the month at Exeter and assimilated into model runs. Observations with a vector wind difference (compared with the model background field) of >60 m s^{-1} have been excluded. Box average values are plotted as the nearest whole number (values of x.5 are rounded up). Where the average is more than 999, then 999 is plotted. A box with no observations is blank. If the 24 hour average >0 but <0.5, then 0 is plotted.

Figures 4A-7A (300-150 hPa) and 4B-7B (1000-301 hPa) show wind statistics for AIREP/ASDAR in AIREP/AMDAR code (including AIREP, ACAR, AMDAR, ASDAR and ADS). Observations with a vector wind difference > 60 m s^{-1} have been excluded. Statistics have not been calculated for 10 degree lat/long boxes containing <31 observations.

Figure	Parameter
4	Mean wind vectors
5	Mean observation - background wind vector
6	Mean observation-background speed (m s^{-1})
7	RMS observation-background vector (m s^{-1})

Radiosonde Observations

TABLES 5-7 contain lists of the stations which are considered to have returned suspect observations of geopotential height, vector wind or wind direction, as appropriate, during the month. The criteria for quality control are given on the header page for each table.

Figures 8 and 9 show 10 degree lat/long box average numbers of TEMP 500 hPa GEOPOTENTIAL HEIGHT and TEMP/PILOT 300 hPa WIND observations received per day throughout the month at Exeter and assimilated into model runs. Data from all hours are included. Box average values are plotted as the nearest whole number (values of x.5 are rounded up). Where the average is more than 999, then 999 is plotted. A box with no observations is blank. If the 24 hour average >0 but <0.5, then 0 is plotted.

APPENDIX I shows details of the gross error limits used in TABLES 5 and 6 and the weights used in the RMS values in TABLE 5.

Satellite Observations

Figures 10-24 show satellite wind statistics for all geostationary satellites. All plots other than **AVAILABILITY** show average data where there are > 10 observations in a 10 degree lat/long box.

Figure	Parameter Plotted	Layer (hPa)
10	Availability/average daily number	701-1000
11	Vector mean wind (observed)	701-1000
12	Observation-background vector wind difference	701-1000
13	Mean observation-background speed differences	701-1000
14	RMS observation-background vector difference	701-1000
15	Availability/average daily number	401-700
16	Vector mean wind (observed)	401-700
17	Observation-background vector wind difference	401-700
18	Mean observation-background speed differences	401-700
19	RMS observation-background vector difference	401-700
20	Availability/average daily number	101-400
21	Vector mean wind (observed)	101-400
22	Observation-background vector wind difference	101-400
23	Mean observation-background speed differences	101-400
24	RMS observation-background vector difference	101-400

Figures 25-39 show sounding statistics from the polar orbitting satellite NOAA-15. Figure 25 shows the mean daily number of ATOVS soundings, and figures 26-39 show mean and standard deviation observation-background differences for brightness temperature, for selected channels.

Figure		Weighting function peak (hPa)
26	Mean	Surface (HIRS8)
27	SD	Surface (HIRS8)
28	Mean	700 (HIRS15)
29	SD	700 (HIRS15)
30	Mean	500-700 (HIRS11)
31	SD	500-700 (HIRS11)
32	Mean	400 (HIRS4)
33	SD	400 (HIRS4)
34	Mean	700 (AMSUA5)
35	SD	700 (AMSUA5)
36	Mean	300 (AMSUA7)
37	SD	300 (AMSUA7)
38	Mean	100 (AMSUA9)
39	RMS	100 (AMSUA9)

Figures 40-54 show sounding statistics from the polar orbitting satellite NOAA-16. Figure 40 shows the mean daily number of ATOVS soundings, and figures 41-54 show mean and standard deviation observation-background differences for brightness temperature, for selected channels.

Figure		Weighting function peak (hPa)
41	Mean	Surface (HIRS8)
42	SD	Surface (HIRS8)
43	Mean	700 (HIRS15)
44	SD	700 (HIRS15)
45	Mean	500-700 (HIRS11)
46	SD	500-700 (HIRS11)
47	Mean	400 (HIRS4)
48	SD	400 (HIRS4)
49	Mean	700 (AMSUA5)
50	SD	700 (AMSUA5)
51	Mean	300 (AMSUA7)
52	SD	300 (AMSUA7)
53	Mean	100 (AMSUA9)
54	RMS	100 (AMSUA9)

Figures 55-69 show sounding statistics from the polar orbitting satellite NOAA-17. Figure 55 shows the mean daily number of ATOVS soundings, and figures 56-69 show mean and standard deviation observation-background differences for brightness temperature for selected channels.

Figure		Weighting function peak (hPa)
56	Mean	Surface (HIRS8)
57	SD	Surface (HIRS8)
58	Mean	700 (HIRS15)
59	SD	700 (HIRS15)
60	Mean	500-700 (HIRS11)
61	SD	500-700 (HIRS11)
62	Mean	400 (HIRS4)
63	SD	400 (HIRS4)
64	Mean	700 (AMSUA5)
65	SD	700 (AMSUA5)
66	Mean	300 (AMSUA7)
67	SD	300 (AMSUA7)
68	Mean	100 (AMSUA9)
69	RMS	100 (AMSUA9)

N.B. All satellite sounding data is bias-corrected (and thinned) before being assimilated in the UKMO NWP model.

3 Composite Observing Systems for the North Atlantic (COSNA)

This section shows statistics for upper air (radiosonde and aircraft) and surface (drifter) data for the North Atlantic area for data received at Exeter during the month.

TABLE 8 shows quality statistics for **Mean Sea-level Pressure, Windspeed and Wind Direction** received at Exeter in DRIFTER code during the month for the area 10°N - 80°N, 85°W - 0°W.

TABLE 9 shows quality statistics for **Temperature and Vector Wind** received at Exeter from aircraft during the month for the area 40°N - 70°N, 60°W - 0°W.

Table 10 - 13 show quality statistics **(Geopotential Height and Windspeed at 100 and 500 hPa)** for all TEMPSHIPS in the area bounded by 0°N - 90°N, 100°W - 40°E and selected TEMP stations within the same area.

Revisions

1. May 95 Monitoring statistics for NOAA-11 removed. Figures 25-27 now show data for NOAA-12
2. May 95 Notes giving details of observations included in wind direction statistics clarified and corrected.
3. August 95 Monitoring statistics for NOAA-14 added with figures 28-30.
4. February 96 Monitoring statistics for GOES-7 have been replaced by statistics for GOES-8 and GOES-9.
5. April 96. 500 km and 120 km SATEMs replaced by 120 km resolution temperature profiles produced locally from the radiances disseminated by NESDIS.
6. February 97 Monitoring statistics for Meteosat 5 have been replaced by statistics for Meteosat 6.
7. Sept 97 Monitoring statistics for NOAA-12 removed. Figures 25-27 now show data for NOAA-11
8. January 1998. Increase in resolution of UKMO global forecast model.
9. April 1998. GOES winds ceased on 2nd March 1998, and were replaced with GOES high resolution winds from 15th.
10. June 1998. Monitoring statistics for Meteosat-6 were replaced by monitoring statistics for Meteosat-7, from 3rd June.
11. June 1998. Corrections in our processing of radiosonde data resulted in a decrease in the number of 500hPa geopotential heights in Figure 8 of about 230 per 24 hours (compared with previous reports), and a small increase in the number of 300hPa winds in Figure 9.
12. July 1998. Meteosat-5 began transmitting winds from 2nd July, at 63 degrees East (over the Indian ocean), and this data is included in the statistics.
13. July 1998. GOES-9 (at 135W) was replaced mid-month by GOES-10 (initially at 105W, moving towards 135W).
14. February 1999. Problems with NOAA-11, and TOVS data ceased to be assimilated from 26 February.
15. March 1999. UKMO introduced 3-D VAR assimilation system on 29 March, and also began assimilating ATOVS data from NOAA-15.
16. May 1999. Included statistics for ATOVS sounding data from NOAA-15.
17. September 1999. Included statistics for high resolution visible winds from Meteosat-5 and Meteosat-7.
18. October 1999. The 3-D VAR assimilation system was upgraded on 19 October, including improvements in the assimilation of ATOVS radiances, use of SSM/I surface wind speed, an improvement in the calculation of surface pressure for SYNOPs, and thinning and revision of observation errors of aircraft data.
19. November 1999. High resolution visible winds from Meteosat-5 and Meteosat-7 removed until used operationally.
20. April 2000. Aireps in Table 4 and Figures 3-7 split into ranges 300-150 hPa (A) and 1000-301 hPa (B).
21. September 2000. Corrected an error affecting the mean positions of a minority of buoys in Table 2.
22. November 2000. An error in the production of Table 6 was corrected. Previously, some sondes with suspect vector winds were being missed.
23. April 2001. Included statistics for ATOVS sounding data from NOAA-16.
24. May 2001. Included statistics for sea surface temperatures from marine surface observations.
25. December 2002. Included statistics for ATOVS sounding data from NOAA-17.
26. December 2002. Meteosat-7 and Meteosat-5 SATOB winds replaced by higher resolution BUFR-coded winds.
27. November 2003.Included temperature and relative humidity statistics for ships, fixed buoys and platforms in Table 1.
28. November 2003. NOAA 17 statistics no longer available due to malfunction of the AMSU-A instrument.
29. December 2005. Included statistics for NOAA-18.

TABLE 1

MONITORING OF MARINE SURFACE OBSERVATIONS
MONTHLY SUSPECT LIST - SHIPS, FIXED BUOYS AND PLATFORMS
MONITORING CENTRE: EXETER
MONTH: Jan 06

Monitoring procedures

Period	:One calendar month.
Data monitored	:Reports from each unique identifier for ships, fixed buoys and platforms.
Standard of comparison	:Background field from UKMO global model.
Observation times	:All hours
Elements monitored	:Mean sea level pressure (hPa). :Wind speed (m s^{-1}). :Wind direction (Degrees). :Air temperature (Degrees C). :Relative Humidity (%). :Sea surface temperature (Degrees).

Parameters monitored

:NOBS	:Number of observations received excluding duplicates.
:PGE	:Percentage of observations with gross errors.
:%REJ	:Percentage of observations flagged excluding those with gross errors.
:SD	:SD of difference of observations from background values excluding those with gross errors.
:BIAS	:Mean difference of observations from background values excluding those with gross errors. **N.B. a positive bias indicates the wind observation is veered to the background.**
:RMS	:Root Mean Square difference of observations from background values excluding those with gross errors.

GROSS ERROR LIMIT
:15 hPa (pressure)
:25 m s^{-1} (vector wind)
:15 degrees (air temperature)
:10 degrees (sea surface temperature)

SELECTION CRITERIA :NOBS ≥ 20 , and one or more of the following:

1.|bias|	≥ 4 hPa	(pressure),
	≥ 5 m s^{-1}	(wind speed),
	≥ 30 degrees	(direction).
	≥ 3 degrees	(sea surface temperature).
	≥ 4 degrees	(air temperature)
	≥ 15%	(relative humidity)
2.SD	≥ 6 hPa	(pressure),
	≥ 80 degrees	(direction).
	≥ 5 degrees	(sea surface temperature).
	≥ 6 degrees	(air temperature)
	≥ 25%	(relative humidity)
3.PGE	≥ 25	

N.B. Observations of wind direction are only included in the wind direction statistics if the observed OR background wind speed > 5 m s^{-1}

IDENTIFIER	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
A8GQ8	P	34	0	24	2.3	4.1	4.8
C6FZ6	P	48	0	0	1.5	7.2	7.3
C6PZ3	P	66	0	0	1.3	5.6	5.7
C6UC3	P	28	0	100	1.3	11.2	11.3
ELVX4	P	40	0	13	0.9	4.0	4.1
ELVX9	P	58	0	2	1.6	4.1	4.4
KS049	P	245	0	1	0.9	-4.6	4.7
OWWS2	P	41	0	61	2.3	4.6	5.1
SKPE	P	29	34	45	3.2	-0.9	3.3
TESTFR1	P	22	100	100			
UCPE	P	24	29	33	2.5	1.3	2.8
UCUF	P	58	57	100	8.9	1.4	9.0
UGNQ	P	45	0	0	1.7	-5.2	5.5
UITP	P	42	12	48	3.4	4.4	5.6
VVCZ	P	20	0	15	1.1	4.5	4.6
V7JG9	P	42	0	38	1.3	-4.0	4.2
WADY	P	20	0	75	1.7	4.1	4.4
WAQ3521	P	24	0	100	2.3	-5.6	6.1
ZCBN9	P	86	0	0	0.7	4.9	4.9
41027	P	147	0	86	1.3	-4.9	5.0
42362	P	644	0	93	3.6	-5.1	6.3
7850	P	37	11	43	3.2	4.0	5.2

IDENTIFIER	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
A8FI3	SPEED	58	2	100	7.1	5.6	9.1
ELNT7	SPEED	38	0	42	5.5	8.6	10.2
LAIP5	SPEED	30	0	100	3.0	-8.5	9.0
LAKQ5	SPEED	46	0	11	3.9	5.4	6.7
P3ZY6	SPEED	24	0	54	4.7	-5.0	6.8
SCKB	SPEED	38	0	16	3.9	5.6	6.9
UCUF	SPEED	50	18	96	5.2	7.5	9.2
VEP717	SPEED	232	0	100	5.0	7.4	8.9
VNSZ	SPEED	157	0	87	4.3	5.6	7.1
ZCDF8	SPEED	21	0	100	3.6	5.9	6.9
42022	SPEED	22	0	0	0.5	-6.4	6.5
9MSM	SPEED	46	2	72	4.7	8.6	9.8

IDENTIFIER	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
DGZN	DIRN.	43	9	0	112.6	-30.9	116.8
ELWX5	DIRN.	29	0	0	82.7	-26.2	86.8
UCUF	DIRN.	45	20	0	78.8	-35.5	86.4
VRYO4	DIRN.	26	0	0	37.5	30.9	48.6
23099	DIRN.	76	0	0	38.7	39.7	55.4
23169	DIRN.	245	0	0	70.1	-33.6	77.7
23172	DIRN.	143	0	0	26.0	-30.3	39.9
46001	DIRN.	316	4	0	88.0	-17.7	89.7
46084	DIRN.	137	0	0	24.3	-31.1	39.5
52002	DIRN.	128	0	0	22.0	-43.5	48.8

IDENTIFIER	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
ELWX5	T	67	100	100			
KS044	T	58	100	100			
LMWR3	T	33	0	100	5.9	-6.9	9.1
SP34	T	122	6	100	4.7	-5.3	7.0
TESTFR1	T	22	77	100	0.4	14.3	14.3
UCJJ	T	70	3	100	6.3	-2.7	6.8
UCUF	T	57	39	100	3.1	10.2	10.6
UDYN	T	50	0	100	1.4	5.2	5.3
WCY2306	T	113	6	100	3.3	6.6	7.3
WDC6907	T	27	0	100	3.2	-4.0	5.1

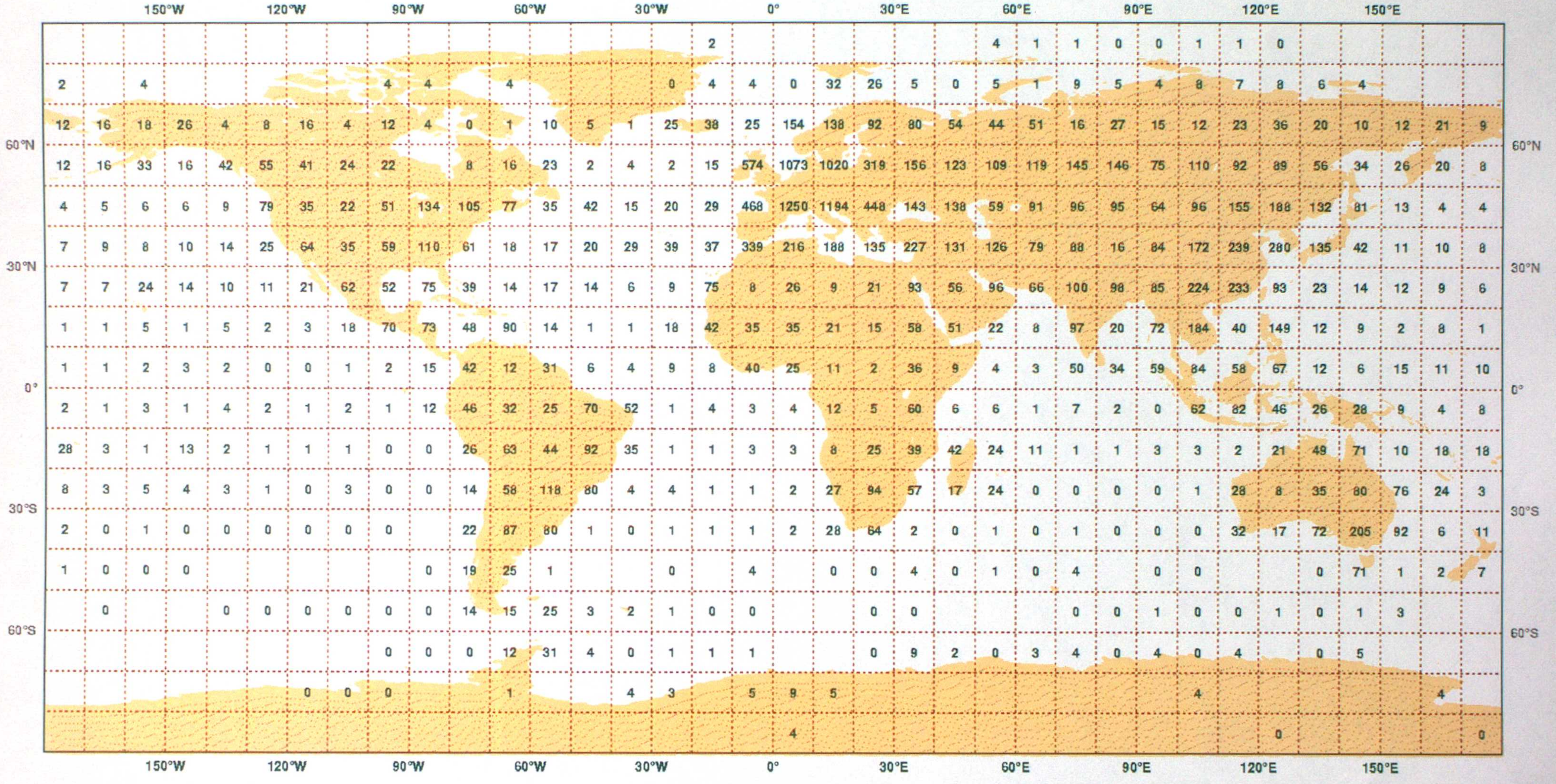
WXJ63	T	239	1	100	3.0	4.9	5.8
44139	T	95	0	100	0.4	6.8	6.8
46081	T	734	0	100	2.4	4.4	5.0
46088	T	378	0	100	1.6	4.0	4.3
46131	T	742	0	100	1.7	4.8	5.1
46146	T	740	0	100	1.6	4.4	4.6
7326	T	25	0	100	1.8	4.1	4.5

IDENTIFIER	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
A8CI8	RH	38	0	100	13.7	25.4	28.8
CGBY	RH	194	0	100	7.9	15.4	17.4
DHAF	RH	24	0	100	10.7	22.8	25.2
ELTZ7	RH	62	0	100	7.3	15.4	17.1
FNAT	RH	54	0	100	9.3	19.5	21.6
HOMF	RH	48	0	100	11.1	-25.8	28.0
JSVY	RH	105	0	100	10.1	-17.5	20.2
TESTFR1	RH	22	0	100	12.5	-64.6	65.8
VRVN6	RH	21	0	100	8.7	21.2	22.9
V7CW5	RH	28	0	100	14.3	15.2	20.9
42362	RH	644	0	100	13.2	23.3	26.8
46078	RH	743	0	100	7.2	16.1	17.7
46081	RH	731	0	100	15.1	17.3	23.0
62133	RH	727	0	100	7.5	-15.5	17.3

IDENTIFIER	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
C6RJ6	SST	46	0	100	0.8	-3.1	3.3
DGTX	SST	39	0	100	2.1	3.0	3.6
DNDD	SST	31	0	100	0.9	3.2	3.3
FNFD	SST	60	0	100	0.5	4.5	4.6
KHRC	SST	54	0	100	0.8	-5.6	5.6
KRPB	SST	62	0	90	2.5	3.1	4.0
KS049	SST	237	6	100	2.5	-4.4	5.1
LMEL	SST	53	0	109	0.8	-6.7	6.7
OWEB2	SST	43	0	7	0.9	-3.2	3.3
PJTA	SST	724	58	62	2.1	-0.4	2.2
P3KT8	SST	25	32	80	1.3	3.4	3.6
S6TY	SST	28	0	100	1.2	3.1	3.3
UCBM	SST	26	0	31	1.8	3.6	4.0
UCMP	SST	21	0	29	1.8	-3.0	3.5
UCUF	SST	57	0	102	1.4	7.5	7.6
UHCO	SST	70	0	43	2.0	-3.5	4.0
UICO	SST	22	0	100	0.7	5.4	5.5
VSQL9	SST	21	5	48	3.4	-3.3	4.8
V2AC6	SST	42	2	100	1.2	3.3	3.5
V7GX5	SST	21	0	100	4.5	-3.9	5.9
WAAH	SST	54	0	100	1.4	3.2	3.5
WCY2306	SST	38	0	234	0.5	-6.4	6.4
WDB9949	SST	40	0	100	1.3	-3.0	3.3
WNDP	SST	27	0	26	0.7	3.6	3.6
WSRH	SST	20	0	100	0.8	-3.9	4.0
WZJD	SST	37	3	100	1.6	-3.4	3.7
ZMFR	SST	128	100	100			
3FMV9	SST	22	5	59	3.6	-4.1	5.4
41035	SST	836	0	100	0.6	-6.0	6.1
42007	SST	725	0	85	0.8	-3.0	3.1
42021	SST	22	0	100	0.2	-4.1	4.1
61298	SST	311	100	100			
61299	SST	297	100	100			
61301	SST	329	100	100			
61302	SST	390	100	100			
61303	SST	325	100	100			
61304	SST	337	100	100			
61305	SST	258	100	100			

61306	SST	263	100	100			
61307	SST	275	100	100			
61308	SST	230	100	100			
61310	SST	245	100	100			
61312	SST	334	100	100			
61314	SST	339	100	100			
62164	SST	551	30	46	3.5	0.2	3.5
9HQK6	SST	29	10	100	1.7	-3.2	3.6
9VAY4	SST	48	0	10	0.6	3.3	3.4

Figure 1. SHIP/SYNOP mean daily count. JANUARY 2006
All hours
Global average number of observations in 24 hours = 21069



																2							4	1	1	0	0	1	1	0					
2		4						4	4		4				0	4	4	0	32	26	5	0	5	1	9	5	4	8	7	8	6	4			
12	16	18	26	4	8	16	4	12	4	0	1	10	5	1	25	38	25	154	138	92	80	54	44	51	16	27	15	12	23	36	20	10	12	21	9
12	16	33	16	42	55	41	24	22		8	16	23	2	4	2	15	574	1073	1020	319	156	123	109	119	145	146	75	110	92	89	56	34	26	20	8
4	5	6	6	9	79	35	22	51	134	105	77	35	42	15	20	29	468	1250	1194	448	143	138	59	91	96	95	64	96	155	188	132	81	13	4	4
7	9	8	10	14	25	64	35	59	110	61	18	17	20	29	39	37	339	216	188	135	227	131	126	79	88	16	84	172	239	280	135	42	11	10	8
7	7	24	14	10	11	21	62	52	75	39	14	17	14	6	9	75	8	26	9	21	93	56	96	66	100	98	85	224	233	93	23	14	12	9	6
1	1	5	1	5	2	3	18	70	73	48	90	14	1	1	18	42	35	35	21	15	58	51	22	8	97	20	72	184	40	149	12	9	2	8	1
1	1	2	3	2	0	0	1	2	15	42	12	31	6	4	9	8	40	25	11	2	36	9	4	3	50	34	59	84	58	67	12	6	15	11	10
2	1	3	1	4	2	1	2	1	12	46	32	25	70	52	1	4	3	4	12	5	60	6	6	1	7	2	0	62	82	46	26	28	9	4	8
28	3	1	13	2	1	1	1	0	0	26	63	44	92	35	1	1	3	3	8	25	39	42	24	11	1	1	3	3	2	21	49	71	10	18	18
8	3	5	4	3	1	0	3	0	0	14	58	118	80	4	4	1	1	2	27	94	57	17	24	0	0	0	0	1	28	8	35	80	76	24	3
2	0	1	0	0	0	0	0	0		22	87	80	1	0	1	1	1	2	28	64	2	0	1	0	1	0	0	0	32	17	72	205	92	6	11
1	0	0	0						0	19	25	1			0		4		0	0	4	0	1	0	4		0	0			0	71	1	2	7
	0			0	0	0	0	0	0	14	15	25	3	2	1	0	0			0	0				0	0	1	0	0	1	0	1	3		
								0	0	0	12	31	4	0	1	1	1			0	9	2	0	3	4	0	4	0	4		0	5			
						0	0	0			1			4	3		5	9	5									4						4	
																		4												0					0

TABLE 2

MONITORING OF MARINE SURFACE OBSERVATIONS
MONTHLY SUSPECT LIST - DRIFTING BUOYS
MONITORING CENTRE: EXETER
MONTH: Jan 06

Monitoring procedures

Period :One calendar month.

Data monitored :Reports from each unique identifier for drifting buoys.

Standard of comparison :Background field from UKMO global model.

Position :Average latitude and longitude for period.

Observation times : All hours

Elements monitored
:Mean sea level pressure (hPa).
:Wind speed (m s^{-1}).
:Wind direction (degrees).
:Sea surface temperature (degrees).

Parameters monitored

:NOBS :Number of observations received excluding duplicates.

:PGE :Percentage of observations with gross errors.

:%REJ : Percentage of observations flagged excluding those with gross errors

:SD :SD of difference of observations from background values excluding those with gross errors.

:BIAS :Mean difference of observations from background values excluding those with gross errors.
N.B. a positive bias indicates the wind observation is veered to the background.

:RMS :Root Mean Square difference of observations from background values excluding those with gross errors.

GROSS ERROR LIMIT	:15 hPa	(pressure)
	:25 m s^{-1}	(vector wind)
	:10 degrees	(sea surface temperature)

SELECTION CRITERIA :	NOBS	≥ 20 , and one or more of the following:	
	1.|bias|	≥ 4 hPa	(pressure),
		≥ 5 m s^{-1}	(wind speed),
		≥ 30 degrees	(direction).
		≥ 3 degrees	(sea surface temperature).
	2.SD	≥ 6 hPa	(pressure),
		≥ 80 degrees	(direction).
		≥ 5 degrees	(sea surface temperature).
	3.PGE	≥ 25.	

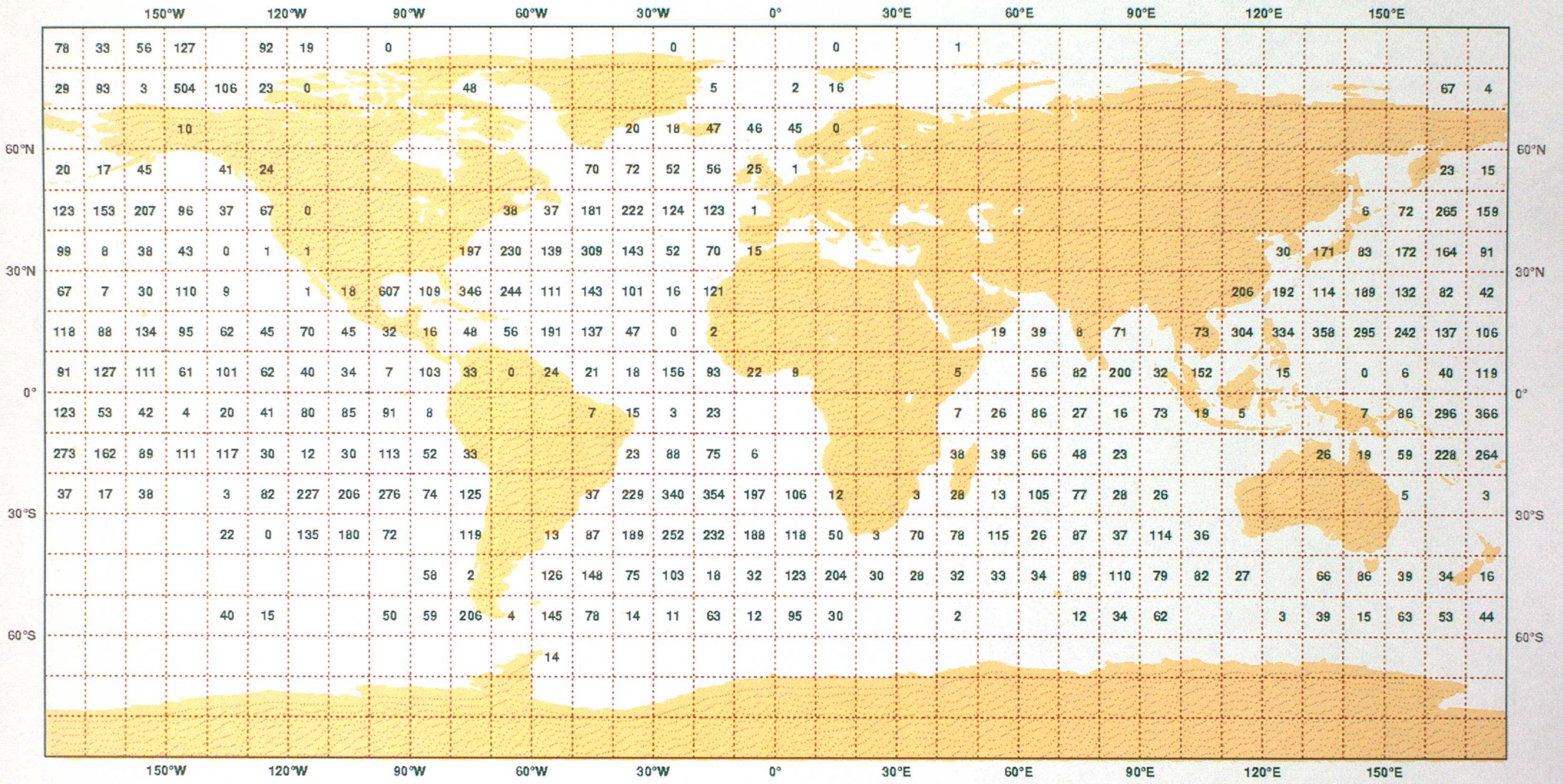
N.B. Observations of wind direction are only included in the wind direction statistics if the observed OR background wind speed > 5 m s^{-1}

IDENTIFIER	LAT.	LONG.	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
21955	43.9	169.6	P	546	3	53	4.0	4.5	6.0
21968	32.2	153.0	P	149	0	48	2.5	4.3	5.0
25574	86.5	40.5	P	25	60	100	4.4	6.2	7.6
31551	-45.7	-41.9	P	1601	6	100	6.2	-2.9	6.8
41927	28.4	-78.4	P	55	0	93	2.0	5.8	6.1
46568	49.0	-166.0	P	180	0	51	2.8	4.4	5.2
46583	43.1	-173.8	P	167	0	68	5.0	-4.0	6.5
53525	-24.0	61.5	P	561	45	54	3.8	-1.4	4.0

IDENTIFIER	LAT.	LONG.	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
41933	24.5	-91.7	SPEED	546	5	100	5.9	6.4	8.7
46643	48.1	-161.6	SPEED	42	0	100	2.6	5.6	6.2

IDENTIFIER	LAT.	LONG.	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
15510	-13.4	-28.8	SST	260	1	100	0.1	-4.0	4.0
15607	-12.5	-37.9	SST	28	14	100	3.4	4.0	5.2
21945	42.8	150.0	SST	85	0	100	2.0	-3.4	4.0
22530	13.4	109.3	SST	28	0	100	0.1	-7.3	7.3
22534	15.5	109.3	SST	403	0	100	1.0	-3.4	3.6
22538	18.4	116.2	SST	27	30	100	4.0	2.4	4.7
22618	20.6	115.5	SST	120	37	52	3.1	-1.9	3.6
32675	-25.8	-132.5	SST	88	44	66	3.4	-1.4	3.7
32823	5.8	-77.8	SST	483	1	100	2.3	-3.1	3.9
33632	-51.3	-75.1	SST	72	51	100	1.0	8.8	8.8
41684	39.3	-61.5	SST	225	0	57	1.2	-3.1	3.3
41928	23.0	-74.9	SST	32	3	100	5.4	1.1	5.5
43578	16.4	-103.2	SST	708	0	100	1.9	-3.6	4.1
51511	6.6	-139.7	SST	534	0	57	2.2	-3.0	3.7
51523	7.2	-140.6	SST	96	0	100	0.3	-4.4	4.4
51959	-8.8	160.7	SST	41	0	100	1.2	-3.0	3.2
53523	20.0	120.1	SST	83	1	55	4.1	-4.1	5.8
53903	21.6	123.4	SST	589	0	100	1.6	-3.0	3.4
53904	21.5	123.5	SST	113	0	100	0.1	-3.9	3.9
61815	34.0	17.1	SST	341	51	100	0.1	0.1	0.2
61816	36.8	11.9	SST	174	100	100			
61817	34.5	17.9	SST	571	47	100	0.4	-0.2	0.4
61818	35.4	12.0	SST	357	52	100	0.2	0.0	0.2
61819	35.4	14.0	SST	548	41	100	0.4	0.1	0.4
61820	36.2	16.6	SST	331	53	100	0.1	-0.3	0.3

Figure 2. DRIFTER mean daily count. JANUARY 2006
All hours
Global average number of observations in 24 hours = 25250



78	33	56	127		92	19		0							0				0			1													
29	93	3	504	106	23	0				48						5		2	16															67	4
			10											20	18	47	46	45	0																
20	17	45		41	24								70	72	52	56	25	1																23	15
123	153	207	96	37	67	0					38	37	181	222	124	123	1															6	72	265	159
99	8	38	43	0	1	1				197	230	139	309	143	52	70	15													30	171	83	172	164	91
67	7	30	110	9		1	18	607	109	346	244	111	143	101	16	121													206	192	114	189	132	82	42
118	88	134	95	62	45	70	45	32	16	48	56	191	137	47	0	2							19	39	8	71		73	304	334	358	295	242	137	106
91	127	111	61	101	62	40	34	7	103	33	0	24	21	18	156	93	22	9				5		56	82	200	32	152		15		0	6	40	119
123	53	42	4	20	41	80	85	91	8				7	15	3	23						7	26	86	27	16	73	19	5			7	86	296	366
273	162	89	111	117	30	12	30	113	52	33				23	88	75	6					38	39	66	48	23					26	19	59	228	264
37	17	38		3	82	227	206	276	74	125			37	229	340	354	197	106	12		3	28	13	105	77	28	26						5		3
				22	0	135	180	72		119		13	87	189	252	232	188	118	50	3	70	78	115	26	87	37	114	36							
									58	2		126	148	75	103	18	32	123	204	30	28	32	33	34	89	110	79	82	27		66	86	39	34	16
				40	15			50	59	206	4	145	78	14	11	63	12	95	30			2			12	34	62			3	39	15	63	53	44
												14																							

TABLE 3

MONITORING OF LAND SURFACE OBSERVATIONS
MONTHLY SUSPECT LIST - SYNOPS & AUTOSYNOPS
MONITORING CENTRE: EXETER
MONTH: Jan 06

Monitoring procedures		
Period		:One calendar month.
Data monitored		:Reports from each unique identifier for synops & autosynops.
Standard of comparison		:Background field from UKMO global model.
Observation times		:00, 06, 12, 18 UTC
Elements monitored		:Surface pressure (hPa).
Parameters monitored	:HT(m)	:Station height (in metres) as given in WMO No. 9 Vol A
	:RP	:Pressure reporting practice M=mean sea level pressure (hPa) reported. S=Station level pressure reported. 8=Geopotential height (m) of 850 hPa surface reported. 7=Geopotential height (m) of 700 hPa surface reported.
	:NOBS	:Number of observations received excluding duplicates.
	:NGE	:Number of observations with gross errors.
	:PGE	:Percentage of observations with gross errors.
	:%REJ	:Percentage of observations flagged excluding those with gross errors.
	:SD	:SD of difference of observations from background values excluding those with gross errors.
	:BIAS	:Mean difference of observations from background values excluding those with gross errors.
	:RMS	:Root Mean Square difference of observations from background values excluding those with gross errors.
GROSS ERROR LIMIT	:15 hPa	(pressure)
SELECTION CRITERIA	:NOBS	≥ 20 ,and one or more of the following:
	1.|bias|	≥ 4 hPa
	2. SD	≥ 6 hPa
	3.PGE	≥ 25.

N.B. For stn ht ≥ 500m, mslp is that calculated from station level pressure where available.
For stn ht < 500m, mslp is that as reported by the station where available.

SUSPECT SYNOPS (PRESSURE) BY WMO REGION JAN 2006

WMO REGION 1:

STATION	LAT	LONG	HT(M)	RP	NOBS	NGE	PGE	%REJ	SD	BIAS	RMS
60423	36.3N	8.0E	680	S8	92	92	100	0			
62056	32.8N	21.9E	625	S8	67	0	0	0	0.9	-4.9	5.0
63330	13.5N	39.5E	2070	MS	20	20	100	30			
63333	11.1N	39.7E	1903	MS	24	0	0	21	0.6	4.9	4.9
63334	10.3N	37.7E	2515	MS	23	0	0	35	1.3	9.8	9.9
63671	1.8N	40.1E	244	M	105	2	2	0	0.9	-4.7	4.8
63801	4.9S	29.6E	882	S8	72	3	4	0	1.2	8.4	8.5
63881	8.0S	31.6E	1923	S	44	3	7	0	3.2	11.9	12.3
67217	13.3S	35.2E	1364	S8	62	0	0	0	1.1	4.0	4.1
67295	19.1S	33.5E	731	S8	61	39	64	56	2.5	13.7	13.9
68014	19.6S	18.1E	1411	S8	89	0	0	0	0.8	-7.5	7.5
68030	18.5S	25.6E	1071	S8	73	5	7	0	4.3	10.4	11.3
68102	19.9S	16.4E	1343	S8	124	0	0	0	0.7	6.0	6.0
68262	25.7S	28.2E	1310	S8	123	0	0	82	1.1	4.4	4.5
68300	26.6S	15.1E	16	S	122	9	7	16	2.7	-12.1	12.4
68312	26.5S	18.1E	1067	S8	89	0	0	0	0.8	4.5	4.6
68396	26.5S	31.3E	641	S8	58	0	0	0	0.6	5.0	5.0
68575	30.0S	30.0E	1175	S8	123	123	100	0			

WMO REGION 2:

STATION	LAT	LONG	HT(M)	RP	NOBS	NGE	PGE	%REJ	SD	BIAS	RMS
24329	66.3N	114.3E	236	MS	110	0	0	0	1.8	4.4	4.8
24671	63.9N	135.9E	402	MS	121	3	2	7	1.4	4.5	4.7
25248	67.3N	168.0E	353	MS	78	0	0	0	2.1	7.6	7.9
30554	54.5N	113.6E	995	MS	124	0	0	0	0.9	12.5	12.5
31123	57.8N	130.9E	255	MS	121	0	0	19	1.8	5.9	6.2
31534	50.4N	131.0E	230	MS	123	0	0	0	1.8	-4.3	4.7
35416	49.1N	54.7E	128	MS	123	0	0	0	0.8	4.6	4.7
38846	38.4N	70.0E	1437	S8	72	3	4	0	3.9	-4.7	6.1
38944	37.5N	69.4E	448	MS	83	2	2	88	2.1	-6.0	6.4
40435	27.0N	44.1E	991	MS	56	0	0	0	1.3	6.6	6.7
40700	39.6N	47.9E	45	MS	115	4	3	1	0.7	-4.9	4.9
40713	37.4N	46.3E	1475	MS	116	31	27	2	1.2	13.7	13.8
40741	36.5N	61.2E	235	MS	115	0	0	1	1.1	-5.3	5.4
40743	36.2N	57.7E	978	MS	119	0	0	1	0.8	6.2	6.3
40757	35.6N	53.4E	1171	MS	117	0	0	2	1.4	5.4	5.6
40780	33.6N	46.4E	1362	MS	115	1	1	0	0.6	4.4	4.4
40854	29.1N	58.4E	1067	MS	111	2	2	1	1.0	10.9	10.9
41252	23.4N	56.5E	244	MS	104	0	0	0	0.7	-9.3	9.3
41254	23.1N	57.6E	1755	S8	122	122	100	0			
41396	16.0N	48.9E	700	MS	59	0	0	0	0.8	6.7	6.7
41466	13.7N	44.1E	1402	S8	92	0	0	0	0.5	-8.3	8.3
44416	28.6N	81.6E	720	MS	79	2	3	0	0.9	4.5	4.6
47020	41.0N	126.6E	305	MS	106	20	19	94	2.6	10.7	11.0
47022	40.8N	128.2E	1224	S	93	0	0	0	0.8	5.8	5.9
47155	35.2N	128.6E	5	MS	124	0	0	0	0.7	-4.1	4.2
47678	33.1N	139.8E	79	MS	124	0	0	0	0.6	-9.3	9.3
48921	21.6N	101.9E	923	S	32	32	100	0			
48924	21.1N	101.5E	644	S	52	0	0	0	0.9	11.5	11.5
48925	20.7N	102.0E	550	MS	45	0	0	0	1.0	-10.3	10.3
48938	19.2N	101.7E	326	MS	53	41	77	0	0.4	14.5	14.5
48952	15.7N	106.4E	168	MS	46	0	0	2	1.7	-4.0	4.3
50727	47.2N	119.9E	1028	MS	124	0	0	0	0.7	4.5	4.6
50978	45.3N	130.9E	234	MS	124	0	0	0	0.6	-6.8	6.8
51243	45.6N	84.9E	428	MS	124	0	0	51	1.1	-5.3	5.4
51379	44.0N	89.6E	794	M	123	0	0	49	2.6	7.2	7.7

51818	37.6N	78.3E	1376	M	123	8	7	31	3.7	6.9	7.8
52112	43.8N	95.1E	469	M	123	3	2	10	3.1	4.1	5.1
52378	41.4N	102.4E	960	M	123	0	0	24	2.9	5.7	6.4
53083	44.6N	114.2E	1183	M	123	0	0	27	2.4	7.1	7.5
53352	41.7N	110.4E	1377	M	123	0	0	46	2.9	7.1	7.7
53480	41.0N	113.1E	1416	M	123	0	0	29	2.5	5.4	6.0
53487	40.1N	113.3E	1069	M	123	0	0	20	2.1	4.0	4.5
53502	39.8N	105.8E	1143	M	123	0	0	33	2.6	5.8	6.4
53593	39.8N	114.6E	910	M	123	0	0	28	2.1	4.2	4.7
53646	38.3N	109.8E	1058	MS	124	6	5	0	0.6	-13.5	13.5
53705	37.5N	105.7E	1185	M	123	0	0	24	2.3	5.5	6.0
53764	37.5N	111.1E	951	M	123	0	0	4	2.1	4.3	4.8
54292	42.9N	129.5E	178	MS	124	0	0	100	0.8	-9.4	9.4
54386	41.4N	128.2E	1018	M	123	0	0	43	2.5	5.9	6.4
56193	32.4N	104.5E	877	M	124	0	0	21	3.7	5.8	6.9
56385	29.5N	103.3E	3049	S	124	0	0	0	2.6	-4.3	5.0
56462	29.0N	101.5E	2994	S	124	0	0	0	1.7	9.0	9.2
56768	25.0N	101.5E	1773	S	124	0	0	0	0.7	-5.7	5.7
56946	23.6N	99.4E	1104	M	124	0	0	0	2.0	4.4	4.8
56954	22.6N	99.9E	1054	M	124	0	0	6	1.7	4.5	4.8
57014	34.6N	105.9E	1086	M	123	0	0	0	3.0	5.1	5.9
57816	26.6N	106.7E	1074	MS	124	116	94	0	0.2	-14.7	14.7
57922	25.8N	107.6E	971	M	123	0	0	0	1.4	4.2	4.4
59007	24.1N	105.1E	1251	M	124	0	0	22	2.9	4.3	5.2
59023	24.7N	108.1E	214	MS	124	0	0	99	0.8	-5.2	5.3
59663	21.8N	112.0E	22	MS	124	0	0	0	0.6	-8.6	8.6

WMO REGION 3:

STATION	LAT	LONG	HT(M)	RP	NOBS	NGE	PGE	%REJ	SD	BIAS	RMS
80099	7.1N	70.7W	122	MS	28	0	0	0	1.2	-6.3	6.4
80426	9.4N	70.6W	582	MS	20	0	0	0	0.8	4.5	4.6
82181	2.0S	54.1W	146	MS	88	0	0	0	1.8	5.1	5.4
82704	7.6S	72.7W	170	MS	91	0	0	0	1.4	-4.6	4.8
83235	12.4S	46.4W	604	MS	90	1	1	1	1.5	5.7	5.9
83332	14.1S	46.4W	826	MS	88	18	20	0	0.8	13.1	13.1
83470	17.9S	50.9W	727	MS	84	1	1	0	1.3	-5.7	5.8
83531	18.6S	46.5W	940	MS	91	0	0	0	1.1	-6.3	6.4
83676	21.1S	49.0W	536	MS	90	1	1	0	1.3	-4.3	4.5
83836	25.5S	50.6W	837	MS	91	1	1	1	1.0	-4.5	4.6
83970	31.3S	50.9W	4	MS	75	2	3	0	1.6	-5.4	5.6
84140	1.1S	79.5W	73	MS	22	0	0	0	0.8	6.7	6.7
84143	1.0S	78.6W	2628	S7	20	0	0	0	0.4	-4.8	4.8
84160	1.3S	78.6W	2940	S7	23	1	4	4	2.1	12.9	13.1
84425	5.9S	76.1W	179	MS	23	0	0	0	1.2	5.6	5.7
84452	6.8S	79.8W	29	MS	110	0	0	0	0.6	4.3	4.3
84455	6.5S	76.4W	281	MS	84	0	0	0	1.8	6.7	6.9
84472	7.1S	78.5W	2620	S	54	0	0	0	1.1	-5.7	5.8
84474	7.2S	76.7W	350	S	22	0	0	0	1.5	9.2	9.3
84686	13.6S	72.0W	3248	S	112	0	0	0	0.7	-4.1	4.2
84688	13.7S	73.4W	3444	S	46	0	0	0	0.7	-12.2	12.2
85140	14.3S	67.4W	140	MS	62	0	0	0	1.8	9.6	9.8
85264	18.5S	64.1W	1998	S	57	57	100	0			
85312	19.8S	63.9W	992	S	37	3	8	14	0.9	-13.1	13.1
85432	22.5S	68.9W	2320	S8	70	0	0	0	0.5	4.1	4.1

WMO REGION 4:

STATION	LAT	LONG	HT(M)	RP	NOBS	NGE	PGE	%REJ	SD	BIAS	RMS
71021	61.3N	124.5W	283	MS	124	0	0	11	1.6	4.8	5.1
71060	52.5N	116.1W	230	MS	124	124	100	0			
71181	47.1N	55.3W	29	MS	119	0	0	0	0.9	-5.9	6.0

71581	54.5N	128.6W	215	MS	124	56	45	0	7.4	-3.2	8.1
71979	53.8N	118.4W	1542	S	101	0	0	0	0.7	9.5	9.5
76055	31.0N	114.9W	440	MS	73	73	100	0			
76225	28.6N	106.1W	1435	MS	96	0	0	0	0.7	-4.2	4.3
76382	25.5N	103.5W	1124	MS	107	1	1	1	1.1	4.1	4.2
76543	22.0N	98.8W	104	MS	50	0	0	0	0.9	9.2	9.2
76658	19.2N	103.7W	494	MS	36	0	0	0	0.7	5.5	5.5
76762	17.5N	99.5W	1265	MS	98	1	1	1	0.7	5.5	5.5
76843	16.8N	93.1W	528	MS	112	0	0	0	0.9	-4.5	4.6
78588	17.2N	87.5W	-278	M	124	124	100	0			

WMO REGION 5:

STATION	LAT	LONG	HT(M)	RP	NOBS	NGE	PGE	%REJ	SD	BIAS	RMS
91258	11.2N	169.9E	2	MS	55	0	0	0	0.5	5.9	5.9
92010	6.1S	145.4E	1587	M	28	1	4	4	0.7	9.9	9.9
94130	14.8S	131.9E	120	MS	123	0	0	0	0.9	5.7	5.8
96505	3.7N	115.7E	912	MS	49	1	2	0	0.6	11.7	11.7
97284	8.6S	120.5E	1170	S8	79	1	1	3	0.9	4.9	5.0

WMO REGION 6:

STATION	LAT	LONG	HT(M)	RP	NOBS	NGE	PGE	%REJ	SD	BIAS	RMS
01355	61.1N	7.5E	36	MS	92	0	0	34	2.0	4.1	4.6
01360	61.9N	7.9E	711	MS	124	0	0	1	1.8	8.0	8.2
06239	54.9N	44.7E	49	MS	372	147	40	0	8.0	-0.8	8.0
06605	47.1N	7.1E	1599	S8	124	0	0	0	1.3	-5.4	5.6
06842	47.4N	9.7E	411	S	29	28	97	100	0.0	-14.9	14.9
08912	42.9N	0.8W	1434	MS	41	41	100	0			
10850	48.8N	10.7E	457	MS	372	0	0	0	0.4	-5.9	5.9
11116	47.5N	10.8E	870	MS	62	1	2	0	0.7	4.9	4.9
12510	50.7N	15.7E	1603	S8	124	0	0	40	1.6	-4.4	4.7
13269	44.3N	19.9E	176	MS	124	1	1	1	0.7	8.3	8.3
13289	44.1N	21.9E	1037	8	124	1	1	63	2.1	-4.0	4.5
13369	43.3N	20.0E	1038	8	123	1	1	16	1.8	-4.1	4.5
14554	44.9N	18.4E	136	S	61	5	8	0	0.9	-13.8	13.8
16344	39.3N	16.4E	1710	S8	246	0	0	0	1.4	4.3	4.5
16538	40.1N	9.3E	1022	S	31	0	0	0	1.1	9.1	9.2
17203	38.9N	40.5E	1177	S8	123	0	0	0	1.2	4.3	4.5
17210	37.9N	41.9E	890	MS	119	0	0	29	1.4	-5.2	5.4
17521	35.2N	33.5E	285	MS	103	103	100	0			
40030	35.1N	36.8E	301	M	116	0	0	22	1.7	-4.2	4.5

ANTARCTIC:

STATION	LAT	LONG	HT(M)	RP	NOBS	NGE	PGE	%REJ	SD	BIAS	RMS
89257	75.4S	59.9W	40	S	833	0	0	0	2.6	-5.8	6.4
89266	72.2S	60.2W	91	S	334	334	100	0			
89272	74.8S	70.5W	1395	S	243	242	100	0			
89327	73.2S	127.1W	230	S	339	104	31	0	3.9	1.2	4.1
89610	65.9S	113.1E	90	S	334	0	0	0	0.7	-9.2	9.2
89614	66.7S	111.5E	500	S	346	346	100	0			
89769	78.5S	168.4E	50	S	880	0	0	0	1.2	-4.4	4.6
89811	66.7S	112.8E	1366	S	337	0	0	0	0.8	-4.3	4.4
89868	79.9S	170.0E	60	S	347	0	0	0	0.8	-4.9	5.0

TABLE 4A

MONTHLY MONITORING OF AIRCRAFT OBSERVATIONS
MONITORING CENTRE: EXETER
MONTH: Jan 06

Monitoring procedures

Period :One calendar month.

Data monitored :Statistics for each airline carrier.

Area monitored :90°N - 90°S, 180°W - 180°E.

Standard of comparison :Background field from UKMO global model.

Observation times :All hours combined.

Level(s) monitored :300.0 - 150.0 hPa

Elements monitored :TEMP in °C ; WIND in m s^{-1}

Parameters monitored

:N REP. :Number of observations received excluding duplicates.

:PG :Percentage of observations with gross errors.

:PR :Percentage of observations rejected by quality control including rejections from the duplicate check.

:PC :Percentage of observations with calm winds.

:RMS :Root Mean Square difference of observations from background values excluding those with gross errors in Temperature & vector wind.

:BIAS :Mean difference of observations from background values excluding those with gross errors in Temperature & Wind Speed.

GROSS ERROR LIMITS :10.0 °C ; 60 m s^{-1} Vector Wind

SELECTION CRITERIA :N REP ≥ 20

NB : All American ACARS data are grouped together and statistics are shown at the bottom of the table as "US ACARS".

IDENT.	N.REP.	TEMPERATURE PG	PR	RMS	BIAS	N.REP.	WIND PG	PR	PC	RMS	BIAS
AAH	2471	0	45	1.4	-0.2	2449	0	45	0	7.2	0.6
AAL	9124	0	24	1.4	0.0	8628	0	24	0	5.8	0.8
AAR	760	1	7	1.9	-0.6	742	0	7	0	7.7	-0.3
ACA	3936	1	12	1.5	-0.1	3471	0	13	0	7.0	0.6
ACF	51	6	51	3.7	-1.2	23	0	48	0	23.1	-4.2
ACI	157	0	20	0.8	0.4	149	0	18	0	6.4	-1.6
AEA	1210	1	4	1.8	0.5	1018	1	4	0	7.3	0.0
AFL	437	1	6	2.0	0.1	193	1	10	0	12.6	0.2
AFR	5224	0	4	1.4	0.1	5129	0	5	0	6.6	0.4
AFZ	35621	0	11	1.7	1.3	35621	0	11	0	5.4	0.8
AJM	263	1	9	1.9	-0.2	228	0	64	0	11.0	0.0
AJX	374	0	7	2.0	0.5	373	1	7	0	7.5	0.6
AMT	2118	2	44	1.4	-0.1	2102	0	44	0	7.4	0.9
AMX	485	1	6	2.0	0.3	431	1	6	0	10.1	-0.2
ANA	122	0	2	1.6	-0.2	121	1	2	0	6.0	0.7
ANZ	8084	0	32	1.2	0.3	8020	0	32	0	7.2	-0.5
ARG	25	0	40	2.1	-1.0	25	0	36	0	4.2	0.9
ATN	105	0	100	4.1	-2.3	86	0	24	0	11.9	2.1
AUA	368	0	3	1.4	0.4	364	0	3	0	5.5	0.8
AVA	472	0	4	1.9	0.2	473	1	3	0	8.5	0.4
AVN	142	0	48	0.6	0.0	142	0	48	0	4.9	0.3
AWE	359	2	17	1.5	-0.5	357	0	15	0	5.4	0.9
AXF	90	2	47	1.0	0.2	87	0	46	0	7.4	0.6
AZA	450	1	100	2.3	1.0	367	1	5	0	8.3	-0.3
BAL	506	0	6	1.5	0.1	483	0	10	0	8.5	0.4
BAW	683	0	15	1.7	-0.2	447	0	9	0	6.9	0.7
BBR	227	0	2	1.5	-0.6	217	0	4	0	8.4	0.9
BHP	102	2	10	1.5	0.2	88	0	6	0	6.7	1.2
BMA	359	0	3	1.3	-0.2	355	0	3	0	4.1	0.6
BPA	729	1	100	2.4	1.0	674	1	11	0	10.4	0.0
BSK	28	0	29	1.6	0.3	24	0	33	0	5.7	1.9
BWA	437	1	5	1.9	-0.4	354	0	3	0	7.4	0.0
CCA	374	3	23	2.8	0.0	324	1	100	0	13.4	-1.4
CES	223	1	11	2.1	-0.3	220	0	10	0	8.6	0.2
CFC	30	3	20	2.3	1.0	29	0	14	0	7.5	0.7
CFG	1194	1	8	1.6	0.3	1019	0	7	0	9.8	0.4
CFY	54	0	0	1.2	-0.6	54	0	0	0	4.2	0.6
CGF	379	0	1	1.4	-0.4	374	0	1	0	4.2	1.0
CGH	416	0	1	1.1	-0.3	400	0	1	0	4.0	0.7
CKK	157	1	8	2.0	0.5	156	1	8	0	8.4	-0.3
CKS	343	0	31	1.6	0.0	273	0	42	0	10.6	1.2
CLX	259	1	8	1.6	-0.4	127	0	70	0	11.3	-0.1
CNJ	34913	0	72	1.3	0.5	34913	0	72	0	5.0	0.6
COA	4818	0	7	1.4	0.1	4715	0	7	0	5.2	0.7
CRL	287	0	8	1.9	0.2	264	0	8	0	10.5	0.6
CSA	44	2	7	2.1	-0.2	39	0	0	0	4.5	0.4
CSD	55	0	9	2.7	0.5	34	0	6	0	9.0	-0.7
CSN	93	6	10	1.6	-0.1	92	0	9	0	9.7	-0.8
CUB	288	1	8	2.3	-0.2	226	1	100	0	10.8	0.4
DAB	836	0	4	1.3	-0.1	805	0	4	0	4.5	0.3
DAI	879	0	8	1.2	0.3	851	0	8	0	4.4	0.9
DAL	3743	0	32	1.6	0.5	3652	0	32	0	5.8	0.6
DLH	3721	0	6	1.3	0.1	3618	0	6	0	4.8	0.6
DRD	470	1	4	1.9	-0.4	463	0	4	0	9.0	-0.2
EDW	62	0	15	2.2	-0.2	49	0	18	0	14.5	1.8
EEZ	176	2	11	2.1	0.1	170	1	6	0	8.2	-0.1
EIA	318	2	80	2.8	0.5	297	1	100	0	18.0	2.1
ELY	486	0	3	1.4	0.3	452	0	3	0	6.3	0.5
ESS	153	2	100	2.8	1.3	41	0	10	0	5.2	0.8

	TEMPERATURE					WIND					
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
EVA	336	0	3	1.4	0.3	339	0	5	0	8.5	-0.3
FCA	198	2	100	2.8	1.2	148	0	7	0	9.7	0.5
FDX	1485	0	49	1.5	0.2	1308	0	49	0	7.0	0.2
FGI	242	0	2	1.2	-0.4	234	0	3	0	5.4	0.6
FGL	179	0	3	1.1	0.2	172	0	3	0	4.5	0.7
FGN	51	0	4	1.1	0.3	48	0	2	0	4.1	0.8
FGS	554	0	3	1.4	0.2	544	0	3	0	4.6	0.9
FGZ	49	0	12	1.0	0.0	48	0	13	0	4.2	0.3
FIN	230	0	4	1.5	0.2	167	1	4	0	6.6	-0.2
FJI	1018	1	36	1.7	0.7	999	0	34	0	6.9	0.8
FOM	909	0	29	1.3	-0.3	908	0	29	0	6.8	0.7
FWI	629	1	10	1.9	-0.5	612	0	7	0	8.6	0.5
GCO	111	0	5	1.8	0.4	107	1	100	0	12.3	1.1
GEC	351	0	23	1.6	0.0	332	1	24	0	8.5	0.7
GOJ	52	0	8	1.6	0.2	51	0	4	0	5.4	1.6
GRL	54	2	2	1.1	0.4	50	0	2	0	6.0	1.2
GTI	138	0	9	2.0	0.5	109	1	10	0	11.8	-0.7
GVA	68	0	6	1.0	-0.2	66	0	5	0	4.8	0.5
GVB	81	0	6	1.0	0.0	76	0	7	0	4.4	0.2
GVF	71	0	3	1.3	-0.4	68	0	3	0	5.1	1.1
GVG	50	0	4	1.7	-0.9	49	0	4	0	6.6	1.7
GVH	45	0	0	1.2	-0.2	41	0	0	0	5.4	1.4
GVL	41	0	2	1.2	-0.1	40	0	3	0	5.0	1.3
GVR	177	0	2	1.3	-0.4	172	0	2	0	4.7	0.5
GVT	40	0	0	1.3	-0.2	40	0	0	0	4.2	0.5
GVW	61	0	0	1.3	-0.4	59	0	0	0	4.3	0.2
GVX	68	0	1	1.0	0.2	67	0	1	0	4.2	1.3
GWW	151	0	4	1.2	-0.4	149	0	3	0	4.0	0.6
HAL	4335	1	40	1.8	0.4	4266	0	39	0	7.5	0.3
HBI	184	0	4	1.4	-0.4	180	0	4	0	4.7	0.9
HBJ	135	0	3	1.1	-0.4	130	0	4	0	4.5	1.0
HMY	103	0	38	1.5	0.2	101	0	38	0	8.3	0.7
IBE	3919	1	4	1.6	0.1	3854	0	5	0	8.1	0.5
ICE	740	2	14	2.4	0.5	435	0	12	0	7.8	0.2
ISR	52	0	4	1.2	-0.1	28	0	11	0	12.8	0.3
IWD	415	1	3	1.8	-0.6	413	0	3	0	6.3	-0.1
JAL	822	0	7	1.6	0.3	808	0	8	0	7.9	-0.1
JAZ	1384	1	5	1.5	0.3	1385	1	6	0	8.3	0.7
JBU	83	2	2	1.0	-0.4	87	0	0	0	4.3	0.2
JKK	22	0	0	1.0	-0.1	22	0	0	0	4.0	0.6
JST	610	0	29	1.4	-0.1	601	0	28	0	6.3	0.4
KAC	89	0	2	1.4	0.5	88	0	0	0	4.5	0.6
KAI	65	0	45	2.5	1.5	61	0	43	0	5.8	0.8
KAL	1382	1	8	1.8	-0.2	1385	1	9	0	8.3	-0.1
KLM	1544	1	11	1.8	0.0	1172	0	13	0	9.7	0.6
LAN	820	0	1	1.3	0.2	819	0	2	0	5.3	0.4
LCO	46	0	2	1.1	0.0	44	0	7	0	12.4	-0.8
LNE	234	1	5	1.8	-0.1	235	0	2	0	8.0	0.6
LNR	370	0	50	1.3	-0.3	364	0	49	0	4.0	0.5
LOB	23	4	4	1.1	-0.3	23	0	0	0	10.5	2.6
LOT	255	2	6	2.0	-0.9	113	3	8	0	9.2	-0.9
LTU	1079	1	6	1.9	-0.1	823	0	6	0	7.6	0.5
LVG	329	1	8	1.9	0.1	291	1	8	0	8.6	1.3
LXJ	33	0	42	0.9	-0.1	31	0	45	0	5.2	-0.6
MAS	253	1	11	2.2	0.2	242	1	7	0	6.7	0.5
MON	78	3	5	1.5	0.0	56	0	5	0	8.4	0.4
MPD	595	0	2	1.7	0.8	575	0	5	0	8.7	0.4
MPH	404	0	4	1.8	-1.1	318	0	6	0	9.2	-0.5
MSR	105	0	0	1.1	0.5	104	0	1	0	4.3	0.7

IDENT.	N.REP.	TEMPERATURE PG	PR	RMS	BIAS	N.REP.	WIND PG	PR	PC	RMS	BIAS
MXA	29	7	24	2.9	0.2	29	0	24	0	17.2	-2.3
MXJ	218	1	11	1.7	-0.1	119	0	3	0	5.8	1.1
MYT	161	1	8	1.8	-0.5	137	1	9	0	9.2	0.1
NAO	139	0	9	1.5	-0.3	122	1	11	0	5.9	0.1
NCA	643	0	4	1.7	0.2	471	0	4	0	7.8	-0.1
NJE	25	0	8	1.9	-0.7	24	0	8	0	4.7	1.1
NOS	165	1	12	1.8	0.8	134	1	11	0	9.9	0.5
NVR	58	0	10	2.5	-0.6	33	0	9	0	11.4	1.4
NWA	8892	0	16	1.7	0.1	8771	0	17	0	7.9	0.3
NZL	6778	0	10	1.0	0.0	6778	0	10	0	4.9	0.2
OAE	518	0	27	1.7	-0.1	371	0	35	0	9.0	1.3
OOM	124	2	12	2.5	0.6	80	0	6	0	6.5	-0.4
OYK	481	0	50	1.2	-0.2	468	0	51	0	4.3	0.6
PAC	269	0	3	1.5	-0.3	246	0	2	0	6.3	-0.1
PAL	1647	1	7	1.7	-0.2	1633	1	11	0	9.8	0.3
PBI	1333	0	44	1.1	-0.2	1331	0	45	0	8.1	0.5
PLM	255	0	3	1.9	1.1	221	1	6	0	8.7	-0.1
QFA	4278	0	52	1.3	0.4	4245	0	52	0	6.3	-0.4
RAM	400	0	7	1.9	0.2	315	1	11	0	11.2	0.0
RCH	389	4	100	3.7	-0.7	279	1	100	0	12.4	0.5
RJA	42	2	7	1.1	-0.2	23	0	4	0	5.8	1.0
RYN	71	0	45	1.2	-0.3	65	0	45	0	5.9	-0.7
RZO	672	2	7	2.0	-0.2	653	0	5	0	8.0	1.2
SAA	109	2	9	1.4	-0.4	109	0	7	0	8.0	0.5
SAS	943	0	62	1.2	-0.1	927	0	61	0	4.2	0.9
SER	552	0	47	1.4	0.1	537	0	47	0	4.3	0.4
SEU	628	2	14	1.9	-0.3	569	1	13	0	10.9	0.5
SIA	847	0	3	1.3	0.3	845	0	3	0	4.9	0.2
SLM	160	0	2	1.2	0.2	159	0	3	0	6.8	0.6
SOO	39	0	5	2.2	0.2	36	0	3	0	6.6	1.1
SQC	357	0	2	1.4	0.1	354	0	2	0	4.9	0.1
SVH	391	0	8	1.3	1.0	391	0	8	0	4.8	0.4
SWR	1526	0	3	1.3	-0.3	1514	0	3	0	5.1	1.0
TAG	64	0	38	2.3	0.6	58	0	40	0	6.8	0.6
TAM	31	3	55	2.8	1.5	30	0	50	0	16.0	-0.3
TAP	804	1	2	1.3	-0.4	732	0	3	0	7.4	0.2
TCV	75	0	100	3.7	3.3	75	0	9	0	10.6	0.6
TCX	257	0	5	1.2	0.3	254	0	4	0	5.1	0.9
TFL	149	0	6	1.7	-0.2	126	0	7	0	9.0	0.1
TGM	22	0	9	2.6	-1.4	22	0	14	0	13.7	-0.9
THA	239	0	10	1.2	0.4	238	0	10	0	5.2	0.6
THT	1738	0	28	1.0	0.3	1691	0	28	0	9.5	-4.7
TSC	57	4	11	2.0	-0.4	37	0	8	0	7.7	0.2
TSO	55	31	49	4.0	0.7	52	0	25	0	15.3	-2.1
TUB	78	0	8	1.8	-0.2	23	0	17	0	11.3	-2.2
UAE	1075	0	5	1.3	0.3	1070	0	5	0	4.8	0.7
UAL	13145	0	34	1.4	0.0	13284	0	34	0	6.7	0.8
UPS	1731	1	58	1.7	-0.2	1302	0	60	0	6.7	0.7
USA	1618	0	3	1.2	0.0	1578	0	3	0	5.0	0.8
VIR	2443	0	2	1.2	-0.1	2344	0	1	0	4.7	0.6
VLE	45	0	18	2.8	-0.8	41	0	17	0	14.3	0.6
VPB	38	0	13	2.2	0.1	20	0	20	0	7.9	2.6
VRG	21	5	33	2.5	1.0	21	0	33	0	18.0	-3.5
VVR	70	6	36	1.9	0.7	67	0	34	0	10.4	1.2
WHT	44	0	5	1.8	-0.6	42	0	2	0	6.0	0.8
WOA	304	2	11	1.6	0.2	232	0	11	0	9.5	0.7
XLA	119	1	8	2.4	1.2	108	1	7	0	10.8	0.5
ZKN	94	0	1	1.2	0.0	92	0	1	0	4.4	0.4
ZKS	103	0	2	1.0	0.0	102	0	2	0	4.4	0.3

		TEMPERATURE						WIND			
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
4XE	27	0	0	1.1	0.5	27	0	0	0	4.4	1.0
9VS	91	0	2	1.2	0.2	91	0	2	0	4.3	-0.1

		TEMPERATURE						WIND			
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
AU	51175	0	16	1.2	0.6	51184	0	15	0	5.2	0.5
B-	19347	0	63	1.7	0.7	15216	1	68	0	5.8	0.2
EU	273380	0	27	1.1	0.2	273379	0	27	0	4.3	0.4
HK	7488	0	7	1.3	0.1	7488	0	7	0	5.2	0.5
HL	38	0	13	2.4	0.4	37	0	11	0	9.4	0.8
JP	67084	0	66	1.8	0.9	67084	0	65	0	5.2	0.6
LN	22	0	32	1.5	-1.1	26	0	35	0	10.2	2.2
MK	3274	0	5	1.8	1.6	3274	0	4	0	6.2	1.3
SA	5988	0	7	1.2	0.7	5988	0	7	0	5.0	0.9
TN	74	4	36	2.4	0.7	80	0	34	0	8.4	0.0
UA	327292	0	99	1.5	-0.2	327125	0	99	0	5.4	0.7

		TEMPERATURE						WIND			
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
N	7174	8	22	1.5	-0.1	6381	0	15	0	5.3	0.6
S	38	0	0	1.2	0.3	38	0	0	0	5.8	0.2

		TEMPERATURE						WIND			
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
US AMDAR	1142172	0	67	1.5	0.2	1142161	0	67	0	5.5	0.7

TABLE 4B

MONTHLY MONITORING OF AIRCRAFT OBSERVATIONS
MONITORING CENTRE: EXETER
MONTH: Jan 06

Monitoring procedures

Period :One calendar month.

Data monitored :Statistics for each airline carrier.

Area monitored :90°N - 90°S, 180°W - 180°E.

Standard of comparison :Background field from UKMO global model.

Observation times :All hours combined.

Level(s) monitored :1000.0 – 300.1 hPa

Elements monitored :TEMP in °C ; WIND in m s^{-1}

Parameters monitored

:N REP. :Number of observations received excluding duplicates.

:PG :Percentage of observations with gross errors.

:PR :Percentage of observations rejected by quality control including rejections from the duplicate check.

:PC :Percentage of observations with calm winds.

:RMS :Root Mean Square difference of observations from background values excluding those with gross errors in Temperature & vector wind.

:BIAS :Mean difference of observations from background values excluding those with gross errors in Temperature & Wind Speed.

GROSS ERROR LIMITS :10.0 °C ; 60 m s^{-1} Vector Wind

SELECTION CRITERIA :N REP ≥ 20

NB: All American ACARS data are grouped together and statistics are shown at the bottom of the table as "US ACARS".

	TEMPERATURE					WIND					
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
AAL	283	1	40	1.5	-0.2	280	0	40	0	7.9	0.4
ACA	94	2	22	2.0	-0.2	88	0	18	0	11.4	1.4
AFR	96	3	11	1.3	0.0	94	0	11	0	8.8	0.0
AFZ	40344	0	68	1.4	-0.3	40344	0	68	0	4.3	0.4
AMT	39	3	23	1.0	0.1	36	0	19	0	7.1	-1.0
ANZ	281	1	13	1.2	0.2	285	0	12	0	4.8	0.1
CFC	48	0	13	1.8	0.3	38	0	18	0	13.2	-1.2
CFG	35	0	14	1.7	1.0	27	0	7	0	11.7	3.4
CKS	87	0	26	1.5	0.1	67	1	45	0	12.2	1.5
CNJ	741840	0	86	1.6	0.5	741840	0	86	0	5.7	-0.5
COA	55	0	5	1.0	0.2	53	0	8	0	5.7	1.6
DAL	115	0	40	1.9	0.5	115	0	41	0	9.0	0.6
EIA	22	0	32	1.4	-0.4	21	0	100	0	19.6	0.2
FDX	593	0	38	1.4	0.3	337	0	36	0	9.6	0.3
GCO	84	0	7	1.4	0.2	76	0	100	0	16.0	3.0
GEC	236	0	23	1.5	0.1	219	0	23	0	10.0	1.4
HAL	644	1	38	2.1	-0.2	638	0	35	0	6.9	1.6
IBE	33	0	9	2.2	0.0	32	0	0	0	5.5	1.1
ICE	55	7	11	1.5	-0.1	36	0	3	0	7.0	0.3
JAL	25	0	8	1.8	-0.5	25	0	8	0	7.8	0.2
JAZ	39	0	8	2.9	-0.3	39	3	8	0	8.8	0.6
KAL	24	0	13	1.2	0.0	24	0	13	0	5.2	0.6
KIW	41	7	44	3.5	1.5	41	0	32	0	7.9	-0.1
LAN	68	0	0	1.2	0.1	68	0	0	0	5.0	0.4
NCA	50	0	4	2.2	0.2	40	3	5	0	7.9	-0.6
NWA	485	3	32	1.4	0.1	467	0	32	0	8.3	0.2
NZL	24799	0	57	1.2	0.0	24797	0	57	0	4.7	0.0
OAE	102	2	23	1.1	-0.2	73	0	23	0	7.3	1.0
OCE	25	0	0	2.2	1.9	24	0	8	0	13.6	4.1
PAL	41	0	20	1.2	-0.8	41	0	22	0	8.0	1.7
QFA	128	1	40	1.0	0.0	128	0	41	0	6.3	0.5
RCH	43	0	100	2.9	1.3	21	0	100	0	7.5	1.1
RRR	107	3	9	2.6	0.8	92	0	13	0	13.0	-0.5
SIA	62	0	2	1.1	0.3	64	0	2	0	4.7	0.7
SKI	246	2	27	2.9	-0.1	368	0	37	0	13.2	1.0
SVH	25634	0	59	1.6	1.0	25634	0	59	0	4.1	0.3
THA	24	0	4	1.4	1.1	24	0	4	0	2.9	0.5
THT	263	0	56	1.1	-0.5	217	0	50	0	4.1	-1.1
UAE	96	0	1	1.1	0.7	96	0	1	0	4.1	-0.3
UAL	237	4	34	1.7	-0.3	258	0	34	0	12.5	1.9
UPS	191	1	49	1.4	-0.1	130	2	48	0	6.2	1.1
VVP	39	8	46	5.7	2.0	37	5	24	0	7.2	1.0
WOA	190	2	6	1.3	0.1	135	0	19	0	13.3	3.1

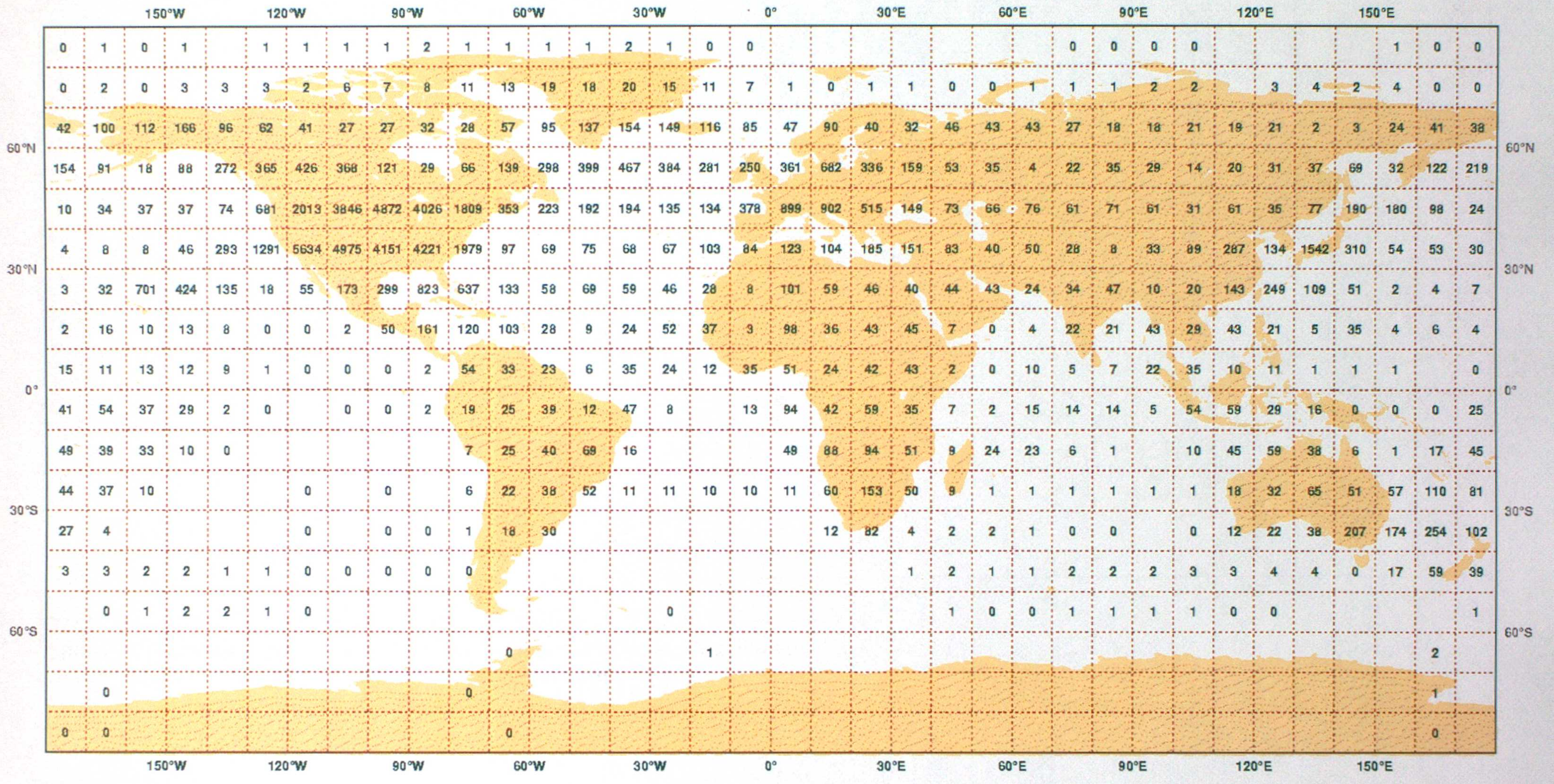
	TEMPERATURE					WIND					
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
AU	50162	0	60	1.2	0.2	50171	0	59	0	4.1	0.0
B-	80073	0	73	1.4	0.5	73609	0	74	0	4.6	0.3
EU	657902	0	67	1.0	0.1	654673	0	67	0	3.6	0.1
HK	22306	0	86	1.4	0.4	22306	0	86	0	4.6	-0.3
JP	282143	0	81	1.4	0.5	282143	0	81	0	4.7	0.5
MK	2906	0	51	1.2	0.5	2904	0	51	0	3.9	0.5
SA	4886	0	68	1.3	0.2	4886	0	68	0	4.3	0.4
UA	245723	0	99	1.1	-0.3	245461	0	99	0	4.6	0.4

	TEMPERATURE					WIND					
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS

	TEMPERATURE					WIND					
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
N	72	24	35	2.3	-0.1	49	0	14	0	5.5	0.5

	TEMPERATURE					WIND					
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
US AMDAR	1893033	0	81	1.2	0.3	1888126	0	81	0	4.4	0.2

Figure 3a. AIRCRAFT 300 - 150 hPa mean daily count. JANUARY 2006
Observations with O-B vector difference greater than 60 ms-1 excluded
Global average number of observations in 24 hours = 68010



0	1	0	1		1	1	1	1	2	1	1	1	1	2	1	0	0								0	0	0	0					1	0	0
0	2	0	3	3	3	2	6	7	8	11	13	19	18	20	15	11	7	1	0	1	1	0	0	1	1	1	2	2		3	4	2	4	0	0
42	100	112	166	96	62	41	27	27	32	28	57	95	137	154	149	116	85	47	90	40	32	46	43	43	27	18	18	21	19	21	2	3	24	41	38
154	91	18	88	272	365	426	368	121	29	66	139	298	399	467	384	281	250	361	682	336	159	53	35	4	22	35	29	14	20	31	37	69	32	122	219
10	34	37	37	74	681	2013	3846	4872	4026	1809	353	223	192	194	135	134	378	899	902	515	149	73	66	76	61	71	61	31	61	35	77	190	180	98	24
4	8	8	46	293	1291	5634	4975	4151	4221	1979	97	69	75	68	67	103	84	123	104	185	151	83	40	50	28	8	33	89	287	134	1542	310	54	53	30
3	32	701	424	135	18	55	173	299	823	637	133	58	69	59	46	28	8	101	59	46	40	44	43	24	34	47	10	20	143	249	109	51	2	4	7
2	16	10	13	8	0	0	2	50	161	120	103	28	9	24	52	37	3	98	36	43	45	7	0	4	22	21	43	29	43	21	5	35	4	6	4
15	11	13	12	9	1	0	0	0	2	54	33	23	6	35	24	12	35	51	24	42	43	2	0	10	5	7	22	35	10	11	1	1	1		0
41	54	37	29	2	0		0	0	2	19	25	39	12	47	8		13	94	42	59	35	7	2	15	14	14	5	54	59	29	16	0	0	0	25
49	39	33	10	0						7	25	40	69	16				49	88	94	51	9	24	23	6	1		10	45	59	38	6	1	17	45
44	37	10				0		0		6	22	38	52	11	11	10	10	11	60	153	50	9	1	1	1	1	1	1	18	32	65	51	57	110	81
27	4					0		0	0	1	18	30							12	82	4	2	2	1	0	0		0	12	22	38	207	174	254	102
3	3	2	2	1	1	0	0	0	0	0											1	2	1	1	2	2	2	3	3	4	4	0	17	59	39
	0	1	2	2	1	0									0							1	0	0	1	1	1	1	0	0					1
											0					1																		2	
	0									0																								1	
0	0										0																							0	

Figure 3b. AIRCRAFT 1000 - 301 hPa mean daily count. JANUARY 2006
Observations with O-B vector difference greater than 60 ms-1 excluded
Global average number of observations in 24 hours = 131020

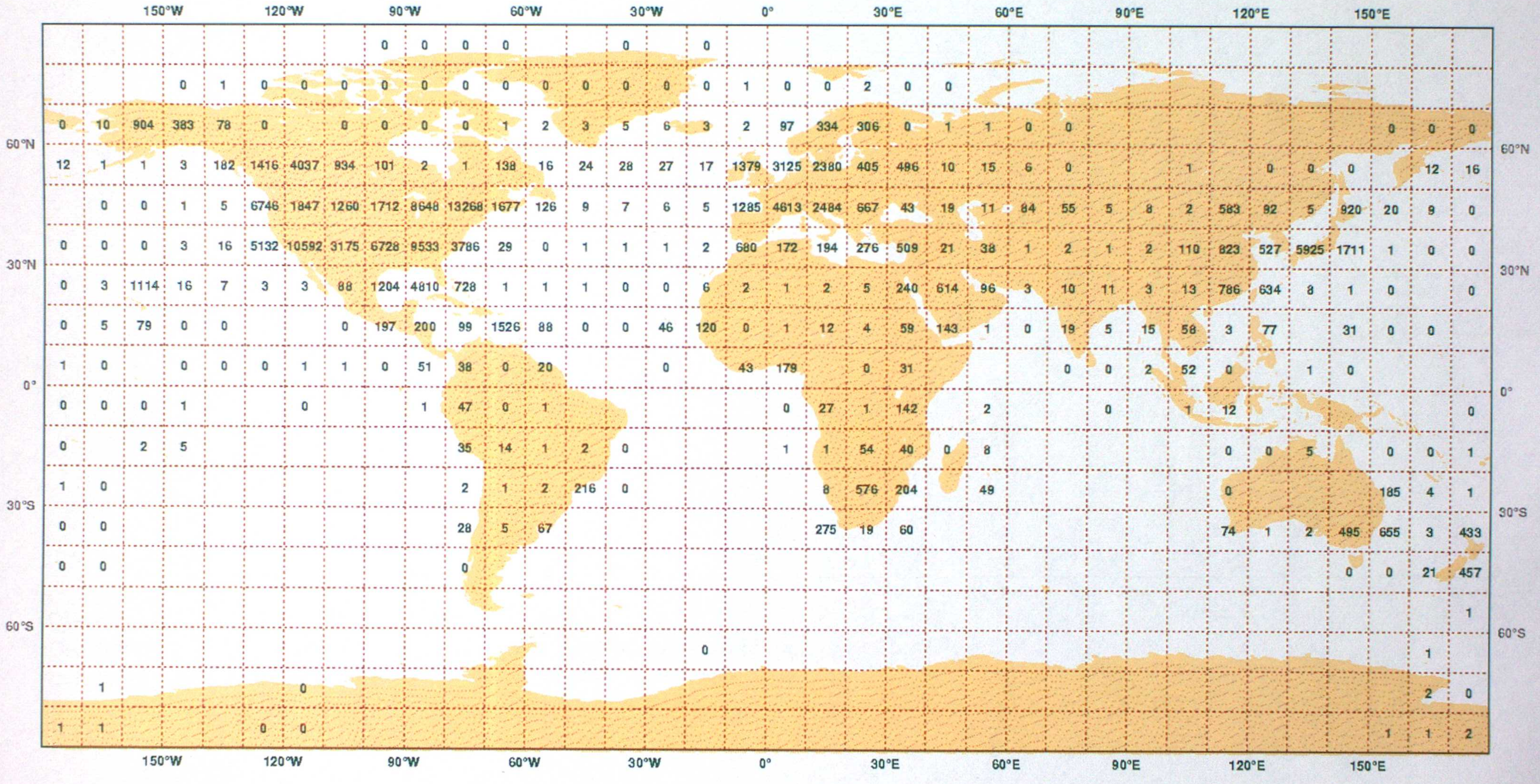

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
0 0 0 0 0 0
0 1 0 0 0 0 0 0 0 0 0 0 0 0 1 0 0 2 0 0
0 10 904 383 78 0 0 0 0 0 1 2 3 5 6 3 2 97 334 306 0 1 1 0 0 0 0 0
12 1 1 3 182 1416 4037 934 101 2 1 138 16 24 28 27 17 1379 3125 2380 405 486 10 15 6 0 1 0 0 0 12 16
0 0 1 5 6746 1847 1260 1712 8648 13268 1677 126 9 7 6 5 1285 4613 2484 667 43 19 11 84 55 5 8 2 583 92 5 920 20 9 0
0 0 0 3 16 5132 10592 3175 6728 9533 3786 29 0 1 1 1 2 680 172 194 276 509 21 38 1 2 1 2 110 823 527 5925 1711 1 0 0
0 3 1114 16 7 3 3 88 1204 4810 728 1 1 1 0 0 6 2 1 2 5 240 614 96 3 10 11 3 13 786 634 8 1 0 0
0 5 79 0 0 0 197 200 99 1526 88 0 0 46 120 0 1 12 4 59 143 1 0 19 5 15 58 3 77 31 0 0
1 0 0 0 0 1 1 0 51 38 0 20 0 43 179 0 31 0 0 2 52 0 1 0
0 0 0 1 0 1 47 0 1 0 27 1 142 2 0 1 12 0
0 2 5 35 14 1 2 0 1 1 54 40 0 8 0 0 5 0 0 1
1 0 2 1 2 216 0 8 576 204 49 0 185 4 1
0 0 28 5 67 275 19 60 74 1 2 495 655 3 433
0 0 0 0 0 21 457
1
0 1
1 0 2 0
1 1 0 0 1 1 2

Figure 4a. AIRCRAFT 300 - 150 hPa mean winds. JANUARY 2006
Observations with O-B vector difference greater than 60 ms-1 excluded
Arrows are plotted where greater than 30 obs are present

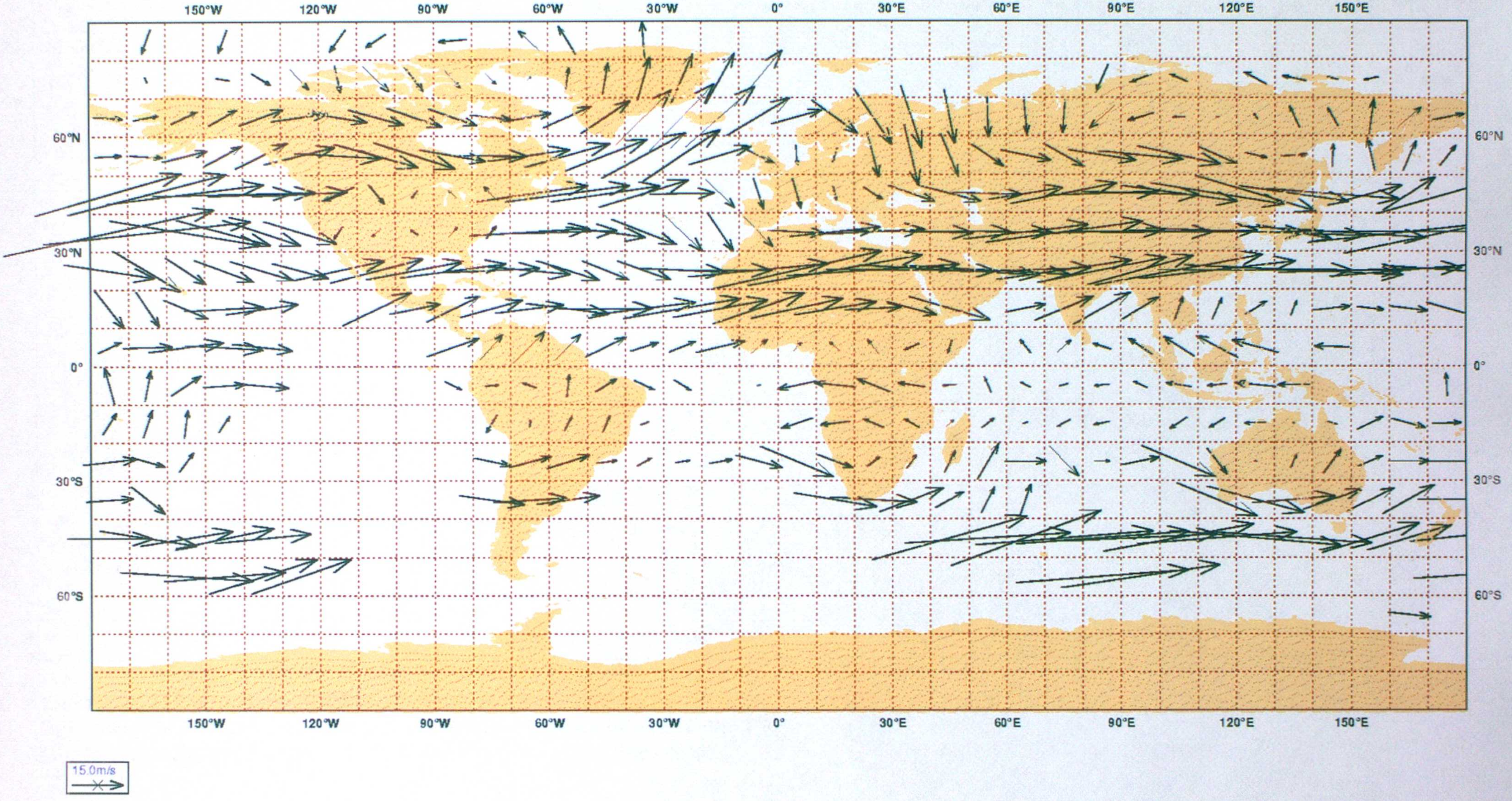

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
15.0m/s

Figure 4b. AIRCRAFT 1000 - 301 hPa mean winds. JANUARY 2006
Observations with O-B vector difference greater than 60 ms-1 excluded
Arrows are plotted where greater than 30 obs are present

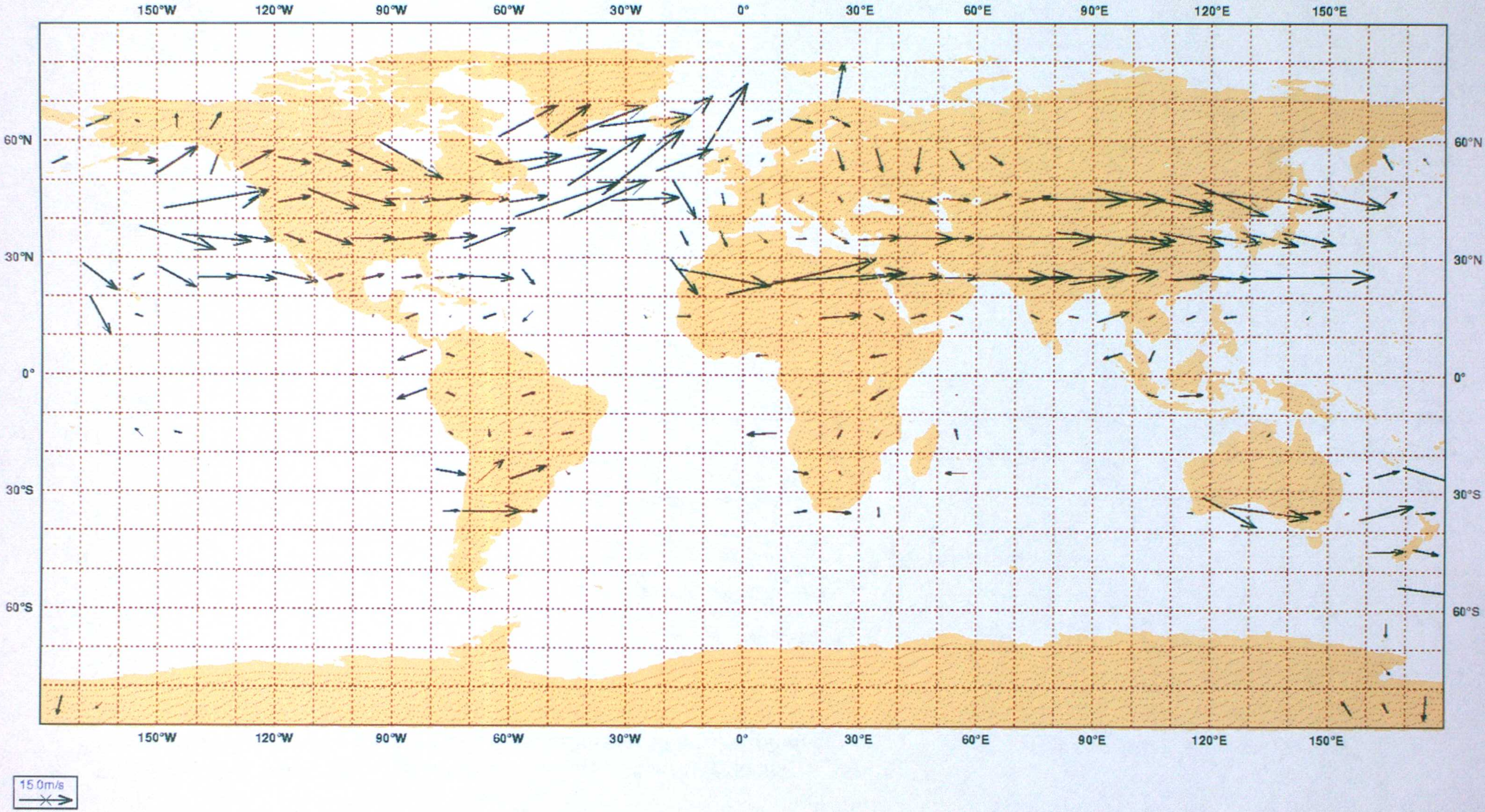

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
15.0m/s

Figure 5a. AIRCRAFT 300 - 150 hPa mean O-B winds. JANUARY 2006
Observations with O-B vector difference greater than 60 ms-1 excluded
Arrows are plotted where greater than 30 obs are present

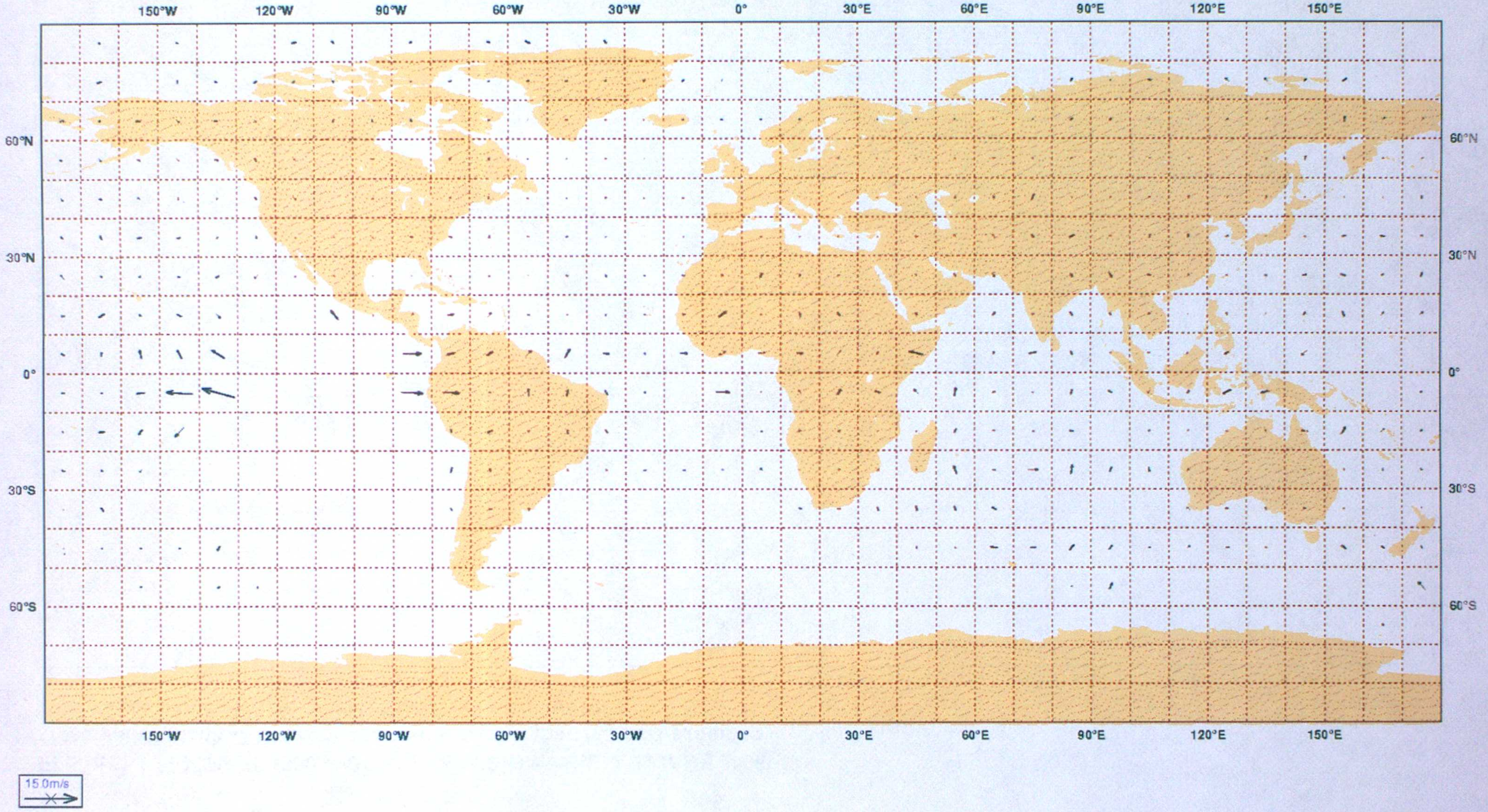

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
15.0m/s

Figure 5b. AIRCRAFT 1000 - 301 hPa mean O-B winds. JANUARY 2006
Observations with O-B vector difference greater than 60 ms-1 excluded
Arrows are plotted where greater than 30 obs are present

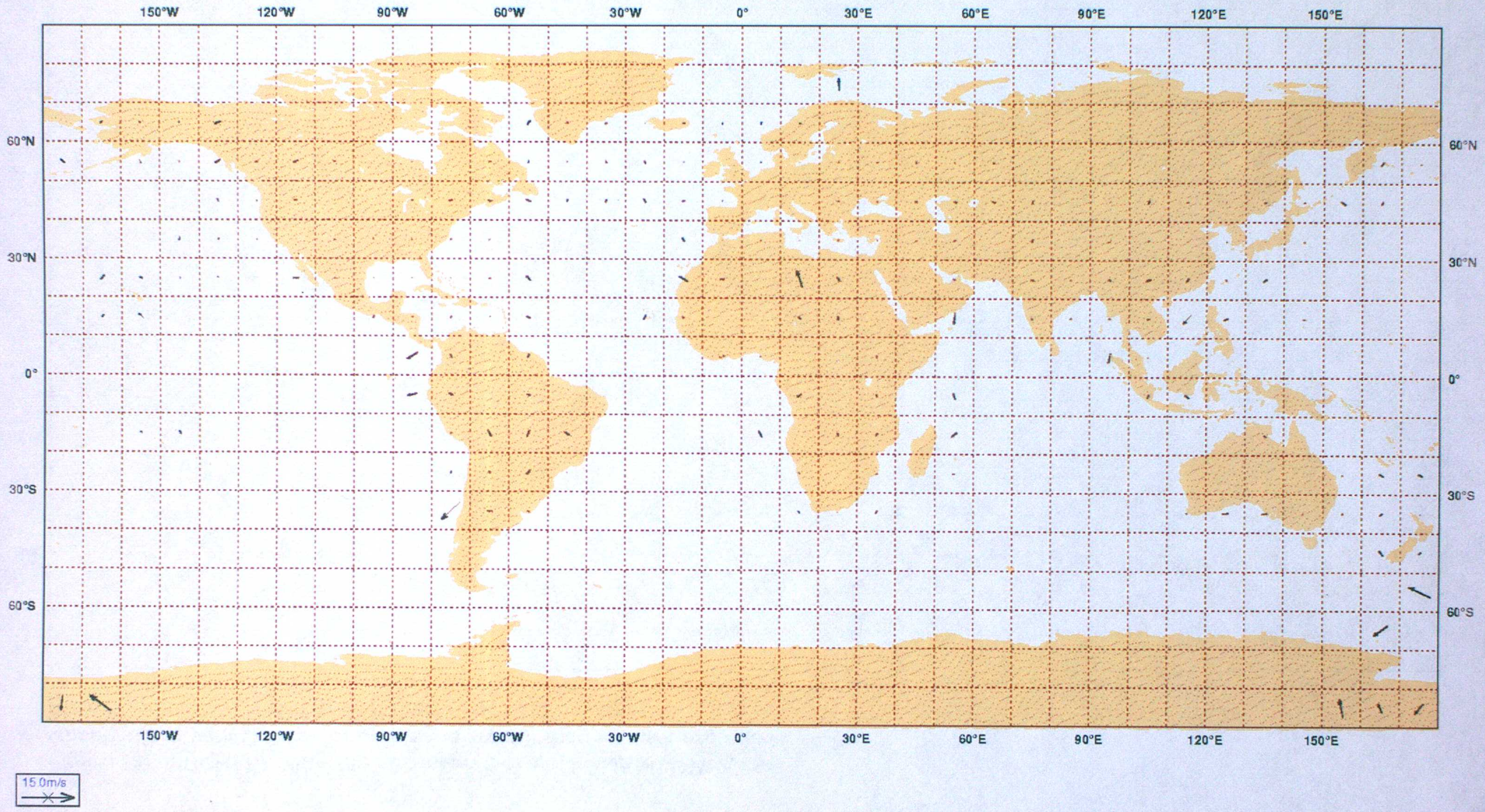
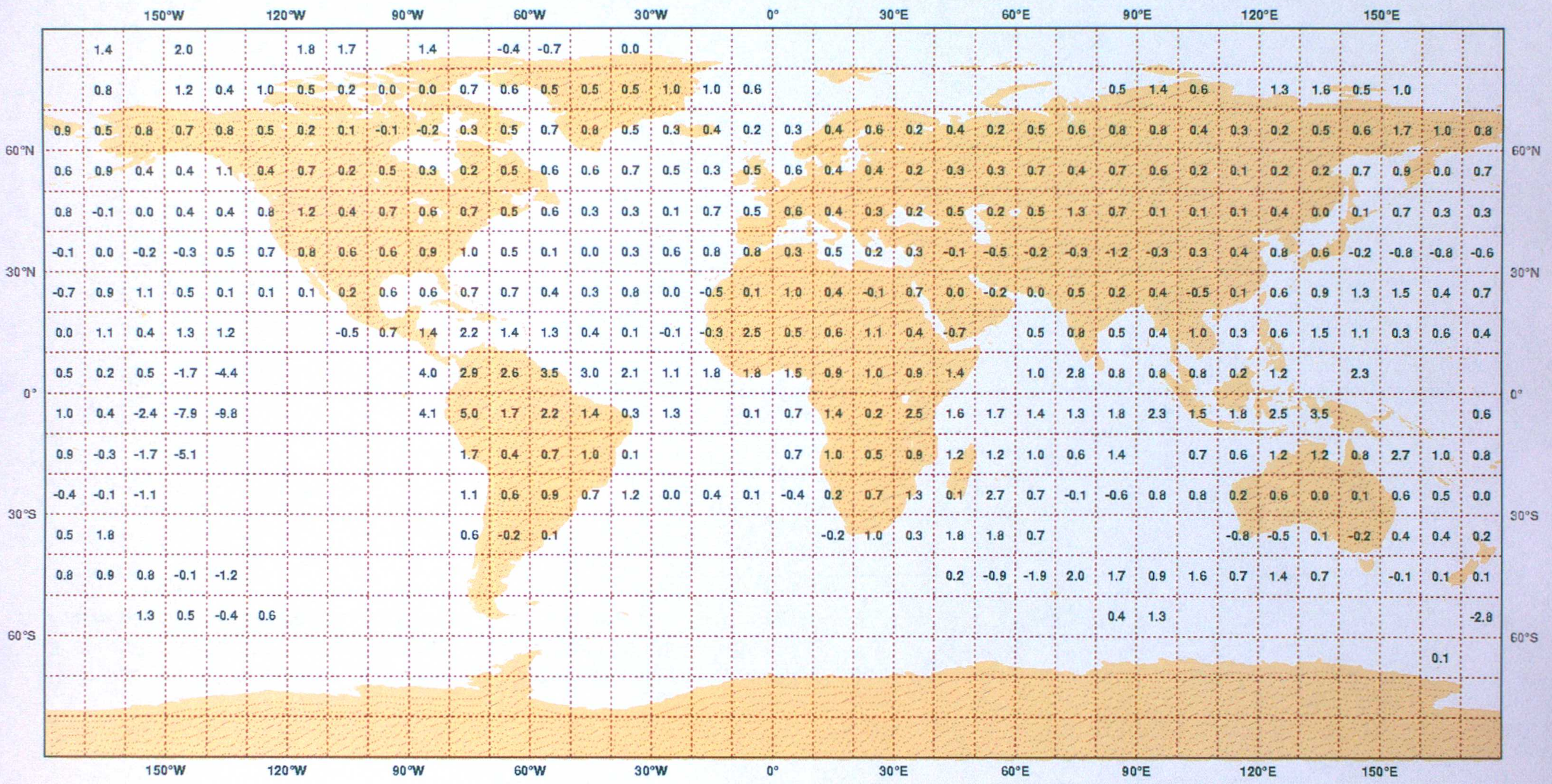

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
15.0m/s

Figure 6a. AIRCRAFT 300 - 150 hPa mean O-B speeds (ms-1). JANUARY 2006
Observations with O-B vector difference greater than 60 ms-1 excluded
Values are printed where greater than 30 obs are present



	1.4		2.0			1.8	1.7		1.4		-0.4	-0.7		0.0																					
	0.8		1.2	0.4	1.0	0.5	0.2	0.0	0.0	0.7	0.6	0.5	0.5	0.5	1.0	1.0	0.6									0.5	1.4	0.6		1.3	1.6	0.5	1.0		
0.9	0.5	0.8	0.7	0.8	0.5	0.2	0.1	-0.1	-0.2	0.3	0.5	0.7	0.8	0.5	0.3	0.4	0.2	0.3	0.4	0.6	0.2	0.4	0.2	0.5	0.6	0.8	0.8	0.4	0.3	0.2	0.5	0.6	1.7	1.0	0.8
0.6	0.9	0.4	0.4	1.1	0.4	0.7	0.2	0.5	0.3	0.2	0.5	0.6	0.6	0.7	0.5	0.3	0.5	0.6	0.4	0.4	0.2	0.3	0.3	0.7	0.4	0.7	0.6	0.2	0.1	0.2	0.2	0.7	0.9	0.0	0.7
0.8	-0.1	0.0	0.4	0.4	0.8	1.2	0.4	0.7	0.6	0.7	0.5	0.6	0.3	0.3	0.1	0.7	0.5	0.6	0.4	0.3	0.2	0.5	0.2	0.5	1.3	0.7	0.1	0.1	0.1	0.4	0.0	0.1	0.7	0.3	0.3
-0.1	0.0	-0.2	-0.3	0.5	0.7	0.8	0.6	0.6	0.9	1.0	0.5	0.1	0.0	0.3	0.6	0.8	0.8	0.3	0.5	0.2	0.3	-0.1	-0.5	-0.2	-0.3	-1.2	-0.3	0.3	0.4	0.8	0.6	-0.2	-0.8	-0.8	-0.6
-0.7	0.9	1.1	0.5	0.1	0.1	0.1	0.2	0.6	0.6	0.7	0.7	0.4	0.3	0.8	0.0	-0.5	0.1	1.0	0.4	-0.1	0.7	0.0	-0.2	0.0	0.5	0.2	0.4	-0.5	0.1	0.6	0.9	1.3	1.5	0.4	0.7
0.0	1.1	0.4	1.3	1.2			-0.5	0.7	1.4	2.2	1.4	1.3	0.4	0.1	-0.1	-0.3	2.5	0.5	0.6	1.1	0.4	-0.7		0.5	0.8	0.5	0.4	1.0	0.3	0.6	1.5	1.1	0.3	0.6	0.4
0.5	0.2	0.5	-1.7	-4.4					4.0	2.9	2.6	3.5	3.0	2.1	1.1	1.8	1.8	1.5	0.9	1.0	0.9	1.4		1.0	2.8	0.8	0.8	0.8	0.2	1.2		2.3			
1.0	0.4	-2.4	-7.9	-9.8					4.1	5.0	1.7	2.2	1.4	0.3	1.3		0.1	0.7	1.4	0.2	2.5	1.6	1.7	1.4	1.3	1.8	2.3	1.5	1.8	2.5	3.5				0.6
0.9	-0.3	-1.7	-5.1							1.7	0.4	0.7	1.0	0.1				0.7	1.0	0.5	0.9	1.2	1.2	1.0	0.6	1.4		0.7	0.6	1.2	1.2	0.8	2.7	1.0	0.8
-0.4	-0.1	-1.1								1.1	0.6	0.9	0.7	1.2	0.0	0.4	0.1	-0.4	0.2	0.7	1.3	0.1	2.7	0.7	-0.1	-0.6	0.8	0.8	0.2	0.6	0.0	0.1	0.6	0.5	0.0
0.5	1.8									0.6	-0.2	0.1							-0.2	1.0	0.3	1.8	1.8	0.7					-0.8	-0.5	0.1	-0.2	0.4	0.4	0.2
0.8	0.9	0.8	-0.1	-1.2																		0.2	-0.9	-1.9	2.0	1.7	0.9	1.6	0.7	1.4	0.7		-0.1	0.1	0.1
		1.3	0.5	-0.4	0.6																					0.4	1.3								-2.8
																																		0.1	

Figure 6b. AIRCRAFT 1000 - 301 hPa mean O-B speeds (ms-1). JANUARY 2006
Observations with O-B vector difference greater than 60 ms-1 excluded
Values are printed where greater than 30 obs are present

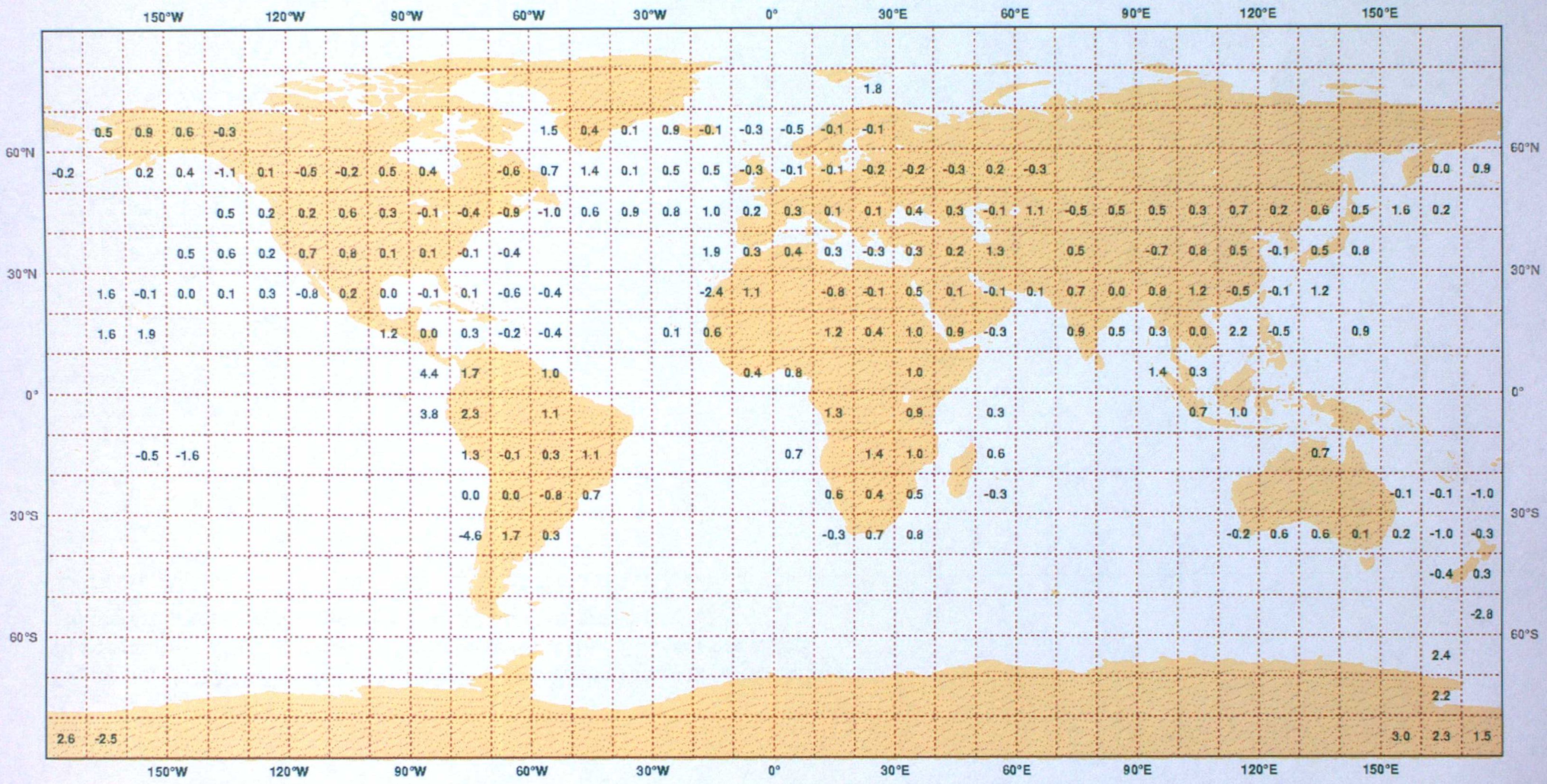

150°W 120°W 90°W 60°W 30°W 0° 30°E 60°E 90°E 120°E 150°E
60°N 30°N 0° 30°S 60°S
1.8
0.5 0.9 0.6 -0.3 1.5 0.4 0.1 0.9 -0.1 -0.3 -0.5 -0.1 -0.1
-0.2 0.2 0.4 -1.1 0.1 -0.5 -0.2 0.5 0.4 -0.6 0.7 1.4 0.1 0.5 0.5 -0.3 -0.1 -0.1 -0.2 -0.2 -0.3 0.2 -0.3 0.0 0.9
0.5 0.2 0.2 0.6 0.3 -0.1 -0.4 -0.9 -1.0 0.6 0.9 0.8 1.0 0.2 0.3 0.1 0.1 0.4 0.3 -0.1 1.1 -0.5 0.5 0.5 0.3 0.7 0.2 0.6 0.5 1.6 0.2
0.5 0.6 0.2 0.7 0.8 0.1 0.1 -0.1 -0.4 1.9 0.3 0.4 0.3 -0.3 0.3 0.2 1.3 0.5 -0.7 0.8 0.5 -0.1 0.5 0.8
1.6 -0.1 0.0 0.1 0.3 -0.8 0.2 0.0 -0.1 0.1 -0.6 -0.4 -2.4 1.1 -0.8 -0.1 0.5 0.1 -0.1 0.1 0.7 0.0 0.8 1.2 -0.5 -0.1 1.2
1.6 1.9 1.2 0.0 0.3 -0.2 -0.4 0.1 0.6 1.2 0.4 1.0 0.9 -0.3 0.9 0.5 0.3 0.0 2.2 -0.5 0.9
4.4 1.7 1.0 0.4 0.8 1.0 1.4 0.3
3.8 2.3 1.1 1.3 0.9 0.3 0.7 1.0
-0.5 -1.6 1.3 -0.1 0.3 1.1 0.7 1.4 1.0 0.6 0.7
0.0 0.0 -0.8 0.7 0.6 0.4 0.5 -0.3 -0.1 -0.1 -1.0
-4.6 1.7 0.3 -0.3 0.7 0.8 -0.2 0.6 0.6 0.1 0.2 -1.0 -0.3
-0.4 0.3
-2.8
2.4
2.2
2.6 -2.5 3.0 2.3 1.5

Figure 7a. AIRCRAFT 300 - 150 hPa RMS O-B vector (ms-1). JANUARY 2006
Observations with O-B vector difference greater than 60 ms-1 excluded
Values are printed where greater than 30 obs are present

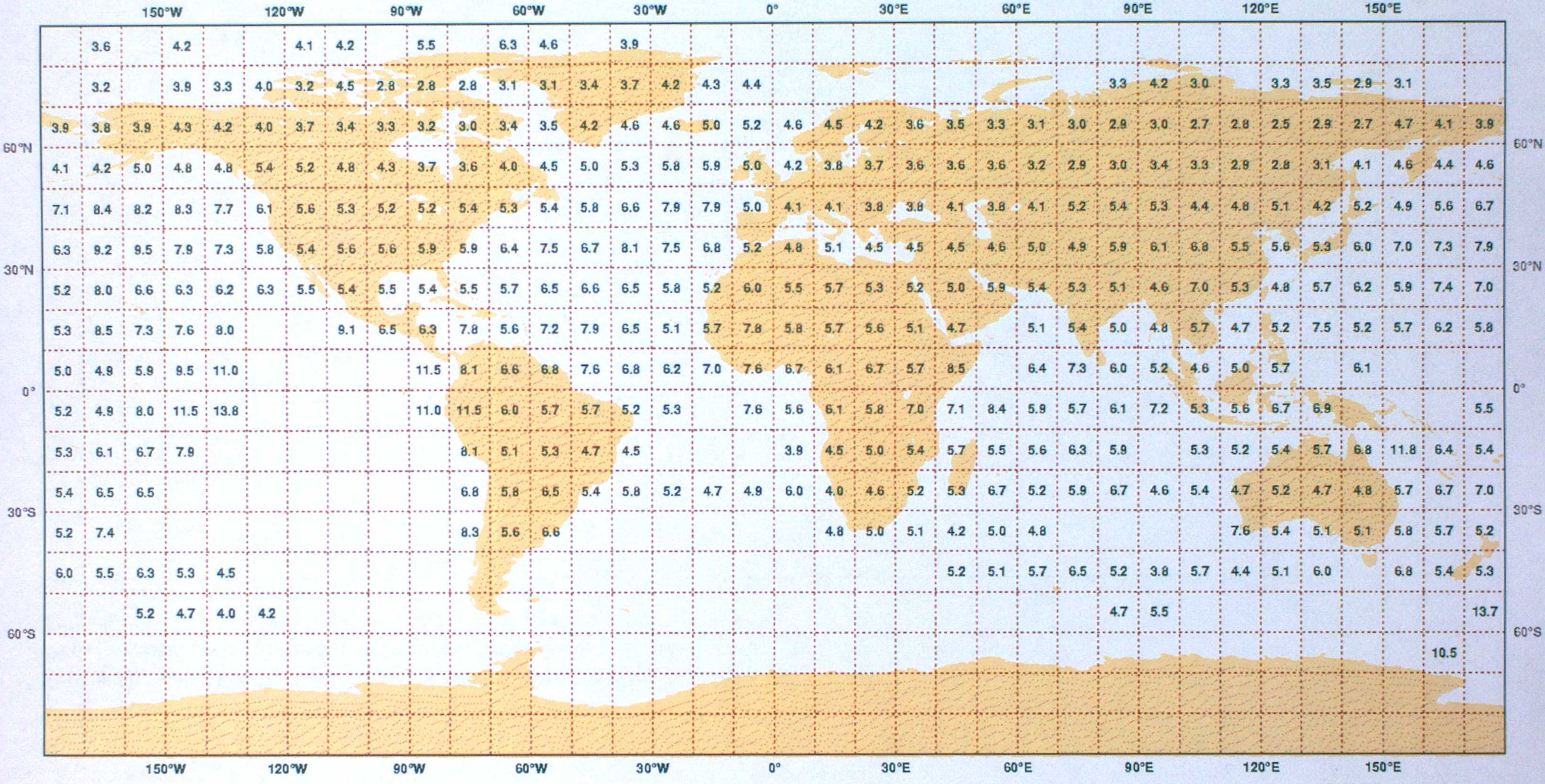

150°W 120°W 90°W 60°W 30°W 0° 30°E 60°E 90°E 120°E 150°E
60°N
30°N
0°
30°S
60°S
3.6 4.2 4.1 4.2 5.5 6.3 4.6 3.9
3.2 3.9 3.3 4.0 3.2 4.5 2.8 2.8 2.8 3.1 3.1 3.4 3.7 4.2 4.3 4.4 3.3 4.2 3.0 3.3 3.5 2.9 3.1
3.9 3.8 3.9 4.3 4.2 4.0 3.7 3.4 3.3 3.2 3.0 3.4 3.5 4.2 4.6 4.6 5.0 5.2 4.6 4.5 4.2 3.6 3.5 3.3 3.1 3.0 2.9 3.0 2.7 2.8 2.5 2.9 2.7 4.7 4.1 3.9
4.1 4.2 5.0 4.8 4.8 5.4 5.2 4.8 4.3 3.7 3.6 4.0 4.5 5.0 5.3 5.8 5.9 5.0 4.2 3.8 3.7 3.6 3.6 3.6 3.2 2.9 3.0 3.4 3.3 2.9 2.8 3.1 4.1 4.6 4.4 4.6
7.1 8.4 8.2 8.3 7.7 6.1 5.6 5.3 5.2 5.2 5.4 5.3 5.4 5.8 6.6 7.9 7.9 5.0 4.1 4.1 3.8 3.8 4.1 3.8 4.1 5.2 5.4 5.3 4.4 4.8 5.1 4.2 5.2 4.9 5.6 6.7
6.3 9.2 9.5 7.9 7.3 5.8 5.4 5.6 5.6 5.9 5.9 6.4 7.5 6.7 8.1 7.5 6.8 5.2 4.8 5.1 4.5 4.5 4.5 4.6 5.0 4.9 5.9 6.1 6.8 5.5 5.6 5.3 6.0 7.0 7.3 7.9
5.2 8.0 6.6 6.3 6.2 6.3 5.5 5.4 5.5 5.4 5.5 5.7 6.5 6.6 6.5 5.8 5.2 6.0 5.5 5.7 5.3 5.2 5.0 5.9 5.4 5.3 5.1 4.6 7.0 5.3 4.8 5.7 6.2 5.9 7.4 7.0
5.3 8.5 7.3 7.6 8.0 9.1 6.5 6.3 7.8 5.6 7.2 7.9 6.5 5.1 5.7 7.8 5.8 5.7 5.6 5.1 4.7 5.1 5.4 5.0 4.8 5.7 4.7 5.2 7.5 5.2 5.7 6.2 5.8
5.0 4.9 5.9 9.5 11.0 11.5 8.1 6.6 6.8 7.6 6.8 6.2 7.0 7.6 6.7 6.1 6.7 5.7 8.5 6.4 7.3 6.0 5.2 4.6 5.0 5.7 6.1
5.2 4.9 8.0 11.5 13.8 11.0 11.5 6.0 5.7 5.7 5.2 5.3 7.6 5.6 6.1 5.8 7.0 7.1 8.4 5.9 5.7 6.1 7.2 5.3 5.6 6.7 6.9 5.5
5.3 6.1 6.7 7.9 8.1 5.1 5.3 4.7 4.5 3.9 4.5 5.0 5.4 5.7 5.5 5.6 6.3 5.9 5.3 5.2 5.4 5.7 6.8 11.8 6.4 5.4
5.4 6.5 6.5 6.8 5.8 6.5 5.4 5.8 5.2 4.7 4.9 6.0 4.0 4.6 5.2 5.3 6.7 5.2 5.9 6.7 4.6 5.4 4.7 5.2 4.7 4.8 5.7 6.7 7.0
5.2 7.4 8.3 5.6 6.6 4.8 5.0 5.1 4.2 5.0 4.8 7.6 5.4 5.1 5.1 5.8 5.7 5.2
6.0 5.5 6.3 5.3 4.5 5.2 5.1 5.7 6.5 5.2 3.8 5.7 4.4 5.1 6.0 6.8 5.4 5.3
5.2 4.7 4.0 4.2 4.7 5.5 13.7
10.5

Figure 7b. AIRCRAFT 1000 - 301 hPa RMS O-B vector (ms-1). JANUARY 2006
Observations with O-B vector difference greater than 60 ms-1 excluded
Values are printed where greater than 30 obs are present

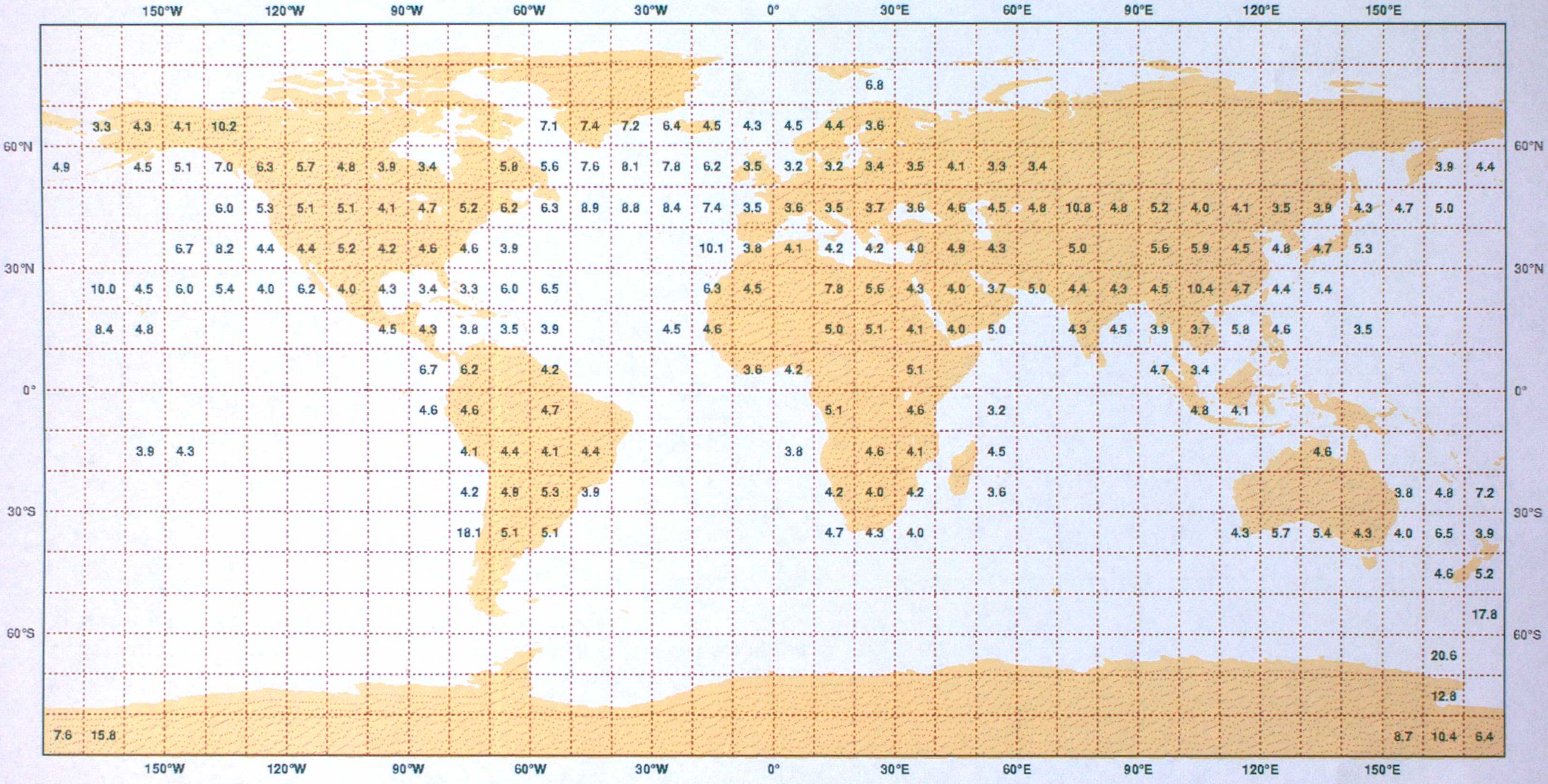

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
6.8
3.3 4.3 4.1 10.2 7.1 7.4 7.2 6.4 4.5 4.3 4.5 4.4 3.6
4.9 4.5 5.1 7.0 6.3 5.7 4.8 3.9 3.4 5.8 5.6 7.6 8.1 7.8 6.2 3.5 3.2 3.2 3.4 3.5 4.1 3.3 3.4 3.9 4.4
6.0 5.3 5.1 5.1 4.1 4.7 5.2 6.2 6.3 8.9 8.8 8.4 7.4 3.5 3.6 3.5 3.7 3.6 4.6 4.5 4.8 10.8 4.8 5.2 4.0 4.1 3.5 3.9 4.3 4.7 5.0
6.7 8.2 4.4 4.4 5.2 4.2 4.6 4.6 3.9 10.1 3.8 4.1 4.2 4.2 4.0 4.9 4.3 5.0 5.6 5.9 4.5 4.8 4.7 5.3
10.0 4.5 6.0 5.4 4.0 6.2 4.0 4.3 3.4 3.3 6.0 6.5 6.3 4.5 7.8 5.6 4.3 4.0 3.7 5.0 4.4 4.3 4.5 10.4 4.7 4.4 5.4
8.4 4.8 4.5 4.3 3.8 3.5 3.9 4.5 4.6 5.0 5.1 4.1 4.0 5.0 4.3 4.5 3.9 3.7 5.8 4.6 3.5
6.7 6.2 4.2 3.6 4.2 5.1 4.7 3.4
4.6 4.6 4.7 5.1 4.6 3.2 4.8 4.1
3.9 4.3 4.1 4.4 4.1 4.4 3.8 4.6 4.1 4.5 4.6
4.2 4.9 5.3 3.9 4.2 4.0 4.2 3.6 3.8 4.8 7.2
18.1 5.1 5.1 4.7 4.3 4.0 4.3 5.7 5.4 4.3 4.0 6.5 3.9
4.6 5.2
17.8
20.6
12.8
7.6 15.8 8.7 10.4 6.4

TABLE 5

MONTHLY MONITORING OF RADIOSONDE OBSERVATIONS
MONITORING CENTRE: EXETER
MONTH: Jan 06

Monitoring procedures

Period		:One calendar month.
Data monitored		:Reports from each unique identifier for radiosonde TEMPs.
Area monitored		:90°N - 90°S, 180°W - 180°E.
Standard of comparison		:Background field from UKMO global model.
Observation times		:00 UTC and 12 UTC.
Level(s) monitored		:Standard levels between 1000.0 - 30.0 hPa
Element monitored		:GEOPOTENTIAL HEIGHT IN metres
Parameters monitored	:NUM OBS	:Number of observations available at level shown during period.
	:NUM GROSS	:Number of gross errors at level shown during period.
	:% REJ	:Percentage of observations rejected by quality control at level shown during period excluding those with gross errors.
	:SD	:SD of difference of observations from background values at level shown excluding those with gross errors.
	:BIAS	:Mean difference of observations from background values at level shown excluding those with gross errors.
	:RMS	:Root Mean Square difference of observations from background values at level shown excluding those with gross errors.
	:NUM LEVELS	:Number of levels satisfying selection criteria.
GROSS ERROR LIMITS	:Defined in Appendix I.1	
SELECTION CRITERIA	: ≥3 levels with ≥10 observations and ≥ 100 m weighted RMS.	

ONLY THE WORST LEVEL IS SHOWN WITH UNWEIGHTED RMS

WMO IDENT	OBS TIME	ELM	LEV	LAT/LONG	NUM OBS	NUM GROSS	SD	BIAS	RMS	NUM LEVELS
20674	00	Z	50	73/ 80	13	1	144.9	35.6	149.2	4
22820	12	Z	250	62/ 34	9	2	37.7	73.9	83.0	5
23418	00	Z	200	65/ 57	27	0	38.5	99.8	107.0	7
23418	12	Z	50	65/ 57	12	0	68.4	158.7	172.9	7
31168	00	Z	50	56/ 138	10	1	118.3	143.4	185.9	5
34731	12	Z	250	47/ 40	18	0	31.1	83.1	88.7	4
42101	00	Z	1000	30/ 76	2	18	6.5	-93.5	93.7	9
42101	12	Z	1000	30/ 76	1	23	0.0	-74.0	74.0	4
42182	00	Z	1000	29/ 77	19	10	12.7	-82.3	83.3	8
42314	00	Z	250	27/ 95	14	1	46.7	-109.7	119.2	5
42314	12	Z	250	27/ 95	9	2	29.3	-157.8	160.5	4
42339	00	Z	1000	26/ 73	17	0	16.6	-72.4	74.2	10
42397	00	Z	300	27/ 88	9	2	37.9	-98.8	105.8	5
42397	12	Z	500	27/ 88	24	0	38.8	-27.6	47.6	4
42647	00	Z	200	23/ 73	21	0	68.4	-64.8	94.2	5
42667	12	Z	200	23/ 77	15	0	43.3	-111.2	119.3	4
42701	00	Z	100	23/ 85	23	0	84.8	-134.4	158.9	9
42724	12	Z	200	24/ 91	12	1	49.2	-115.3	125.4	5
42809	00	Z	200	23/ 88	26	0	75.3	-85.3	113.8	9
42809	12	Z	100	23/ 88	19	4	127.8	-128.4	181.1	10
42867	00	Z	200	21/ 79	12	0	23.5	-121.8	124.1	7
42971	00	Z	100	20/ 86	16	0	93.6	-131.7	161.6	6
42971	12	Z	100	20/ 86	16	1	113.7	-115.5	162.1	6
43003	00	Z	150	19/ 73	15	3	53.1	-193.6	200.7	12
43003	12	Z	250	19/ 73	23	1	87.1	-57.4	104.4	8
43128	00	Z	100	17/ 78	10	1	100.7	-160.1	189.2	5
43150	00	Z	100	18/ 83	22	0	93.2	-147.6	174.6	10
43185	00	Z	200	16/ 81	15	1	73.1	-108.5	130.8	7
43192	00	Z	200	15/ 74	17	1	70.9	-148.6	164.6	8
43192	12	Z	150	15/ 74	10	0	132.2	-29.5	135.5	4
43333	00	Z	150	12/ 93	24	0	72.6	-114.0	135.1	4
43333	12	Z	100	12/ 93	16	1	73.7	-149.6	166.8	4
43346	00	Z	200	11/ 80	10	1	31.8	-118.3	122.5	6
43353	00	Z	1000	10/ 76	27	0	15.0	-79.9	81.2	5
43353	12	Z	1000	10/ 76	15	10	10.6	-83.9	84.5	5
43371	00	Z	100	8/ 77	21	3	88.4	-128.0	155.6	7
43371	12	Z	70	8/ 77	14	0	168.0	32.6	171.2	7
78866	12	Z	850	18/ -63	18	3	43.0	2.6	43.1	5
89592	12	Z	50	-67/ 93	12	0	35.9	160.2	164.2	4
96163	00	Z	200	-1/ 100	14	0	97.7	-27.4	101.4	4
96935	00	Z	1000	-7/ 113	22	0	10.3	-39.8	41.1	8
96935	12	Z	1000	-7/ 113	22	1	12.2	-48.9	50.4	10
97014	00	Z	200	2/ 125	27	1	51.0	-86.1	100.1	8
97180	00	Z	1000	-5/ 120	27	1	8.1	-64.4	65.0	10
97180	12	Z	1000	-5/ 120	25	2	11.4	-61.8	62.8	8
97560	00	Z	100	-1/ 136	14	2	164.9	-57.3	174.5	9
97560	12	Z	200	-1/ 136	13	3	124.9	-67.1	141.8	9

Figure 8. TEMP 500 hPa geopotential mean daily count. JANUARY 2006
All hours
Global average number of observations in 24 hours = 1213

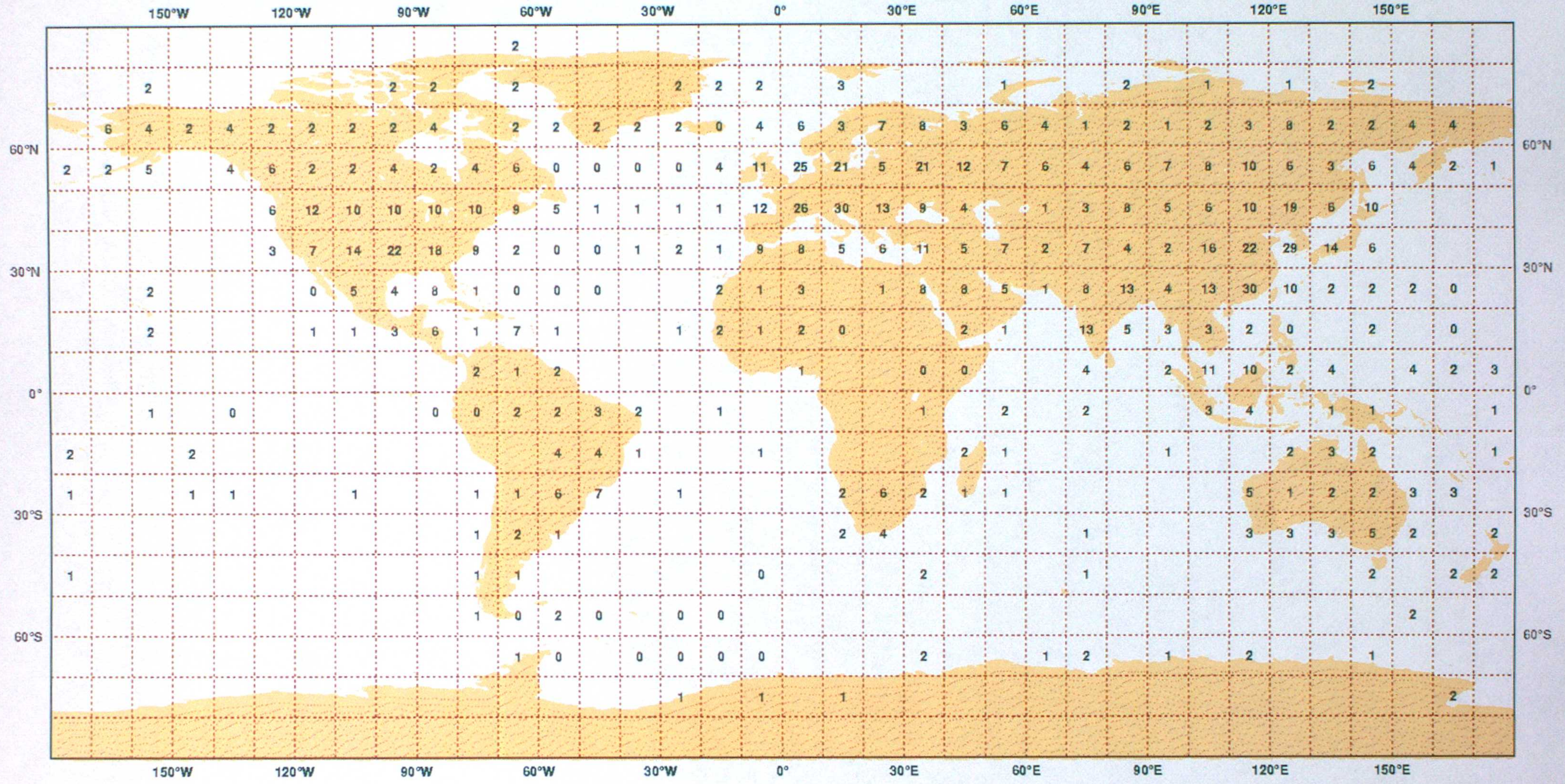

150°W 120°W 90°W 60°W 30°W 0° 30°E 60°E 90°E 120°E 150°E
60°N
30°N
0°
30°S
60°S
2
2 2 2 2 2 2 2 3 1 2 1 1 2
6 4 2 4 2 2 2 2 4 2 2 2 2 2 0 4 6 3 7 8 3 6 4 1 2 1 2 3 8 2 2 4 4
2 2 5 4 6 2 2 4 2 4 6 0 0 0 0 4 11 25 21 5 21 12 7 6 4 6 7 8 10 6 3 6 4 2 1
6 12 10 10 10 10 9 5 1 1 1 1 12 26 30 13 9 4 1 3 8 5 6 10 19 6 10
3 7 14 22 18 9 2 0 0 1 2 1 9 8 5 6 11 5 7 2 7 4 2 16 22 29 14 6
2 0 5 4 8 1 0 0 0 2 1 3 1 8 8 5 1 8 13 4 13 30 10 2 2 2 0
2 1 1 3 6 1 7 1 1 2 1 2 0 2 1 13 5 3 3 2 0 2 0
2 1 2 1 0 0 4 2 11 10 2 4 4 2 3
1 0 0 0 2 2 3 2 1 1 2 2 3 4 1 1 1
2 2 4 4 1 1 2 1 1 2 3 2 1
1 1 1 1 1 1 6 7 1 2 6 2 1 1 5 1 2 2 3 3
1 2 1 2 4 1 3 3 3 5 2 2
1 1 1 0 2 1 2 2 2
1 0 2 0 0 0 2
1 0 0 0 0 0 2 1 2 1 2 1
1 1 1 2

TABLE 6

MONTHLY MONITORING OF RADIOSONDE OBSERVATIONS
MONITORING CENTRE: EXETER
MONTH: Jan 06

Monitoring procedures		
Period		:One calendar month.
Data monitored		:Reports from each unique identifier for radiosonde TEMPs.
Area monitored		:90°N - 90°S, 180°W - 180°E.
Standard of comparison		:Background field from UKMO global model.
Observation times		:00 UTC and 12 UTC.
Level(s) monitored		:Standard levels between 1000.0 - 100.0 hPa
Element monitored		:VECTOR WIND in m s^{-1}
Parameters monitored	:NUM OBS	:Number of observations available at level shown during period.
	:NUM GROSS	:Number of gross errors at level shown during period.
	:% REJ	:Percentage of observations rejected by quality control at level shown during period excluding those with gross errors.
	:UBIAS,VBIAS	:Mean difference of observations of U and V components from background values at level shown excluding those with gross errors.
	:RMS	:Root Mean Square difference of observations from background values at level shown excluding those with gross errors.
	:NUM LEVELS	:Number of levels satisfying selection criteria.
GROSS ERROR LIMITS	:Defined in Appendix I.2	
SELECTION CRITERIA	: ≥ 10 observations and ≥ 15 m s^{-1} RMS vector wind.	

ONLY THE STANDARD LEVEL BETWEEN 1000 - 100 hPa WITH HIGHEST RMS IS SHOWN

WMO IDENT	OBS TIME	ELM	LEV	LAT/LONG	NUM OBS	NUM GROSS	% REJ	UBIAS	VBIAS	RMS	LEVELS
22820	12	V	500	62/ 34	18	0	33	0.0	7.7	17.9	3
40582	00	V	200	29/ 48	23	0	4	-3.5	-4.7	25.4	1
41685	12	V	700	30/ 70	15	0	33	-5.2	-6.2	16.2	1
41712	12	V	700	29/ 64	2	8	50	-14.8	-3.7	20.5	1
41718	12	V	500	29/ 71	10	0	100	-13.2	-1.5	15.3	1
41768	12	V	500	26/ 70	11	0	100	-17.3	-3.1	21.9	1
42101	00	V	200	30/ 76	13	0	100	-8.7	-3.1	21.0	2
42101	12	V	200	30/ 76	15	1	100	-12.5	-1.0	27.8	2
42182	00	V	300	29/ 77	30	0	93	-4.3	-15.1	21.4	5
42182	12	V	250	29/ 77	30	0	100	-2.7	-14.5	20.3	5
42701	00	V	200	23/ 85	24	0	100	-13.5	-5.6	18.9	3
42701	12	V	200	23/ 85	22	0	100	-14.5	-3.4	20.0	5
42874	12	V	250	21/ 82	16	0	37	13.2	0.7	16.8	2
51431	12	V	300	44/ 81	31	0	3	-1.3	1.0	18.8	4
54497	00	V	100	40/ 124	23	0	100	-1.9	2.8	16.9	1
54497	12	V	200	40/ 124	27	1	100	-8.2	5.3	21.5	5
58606	00	V	300	29/ 116	31	0	3	-3.6	3.2	18.4	1
60590	12	V	250	31/ 3	12	0	100	-38.5	-6.7	42.3	6
60620	12	V	250	28/ 0	19	0	100	-32.4	-4.3	35.1	5
61641	00	V	150	15/ -17	15	0	13	-3.7	-2.6	27.4	1
62337	12	V	150	31/ 34	24	1	100	-15.8	6.1	33.9	5
62378	00	V	150	30/ 31	16	0	100	-13.7	4.4	26.8	5
62378	12	V	150	30/ 31	16	1	100	-14.7	5.1	32.2	3
62403	12	V	100	26/ 33	11	0	100	10.4	4.0	15.2	1
62423	00	V	150	27/ 28	23	0	100	-18.4	3.5	47.0	2
71801	00	V	200	48/ -53	25	0	4	-5.0	2.0	15.3	1
72376	00	V	300	37/-108	29	0	100	-7.2	3.3	17.1	2
72376	12	V	250	37/-108	30	0	100	-7.2	1.7	16.0	1
78073	12	V	300	25/ -77	20	0	20	1.6	-3.6	21.4	3
96035	00	V	100	4/ 99	28	0	100	15.0	-4.7	24.5	1
96163	00	V	100	-1/ 100	12	0	100	14.8	2.3	23.4	2
96237	00	V	100	-2/ 106	15	0	100	14.1	-1.1	21.0	1
96935	00	V	100	-7/ 113	19	0	100	21.3	-0.5	30.2	1
96935	12	V	100	-7/ 113	23	0	95	19.2	-0.9	23.5	2
97180	00	V	100	-5/ 120	29	0	100	12.8	-0.6	19.3	1
97180	12	V	100	-5/ 120	25	0	100	12.5	-4.2	19.7	2

Figure 9. TEMP/PILOT 300 hPa wind mean daily count. JANUARY 2006
All hours
Global average number of observations in 24 hours = 1350

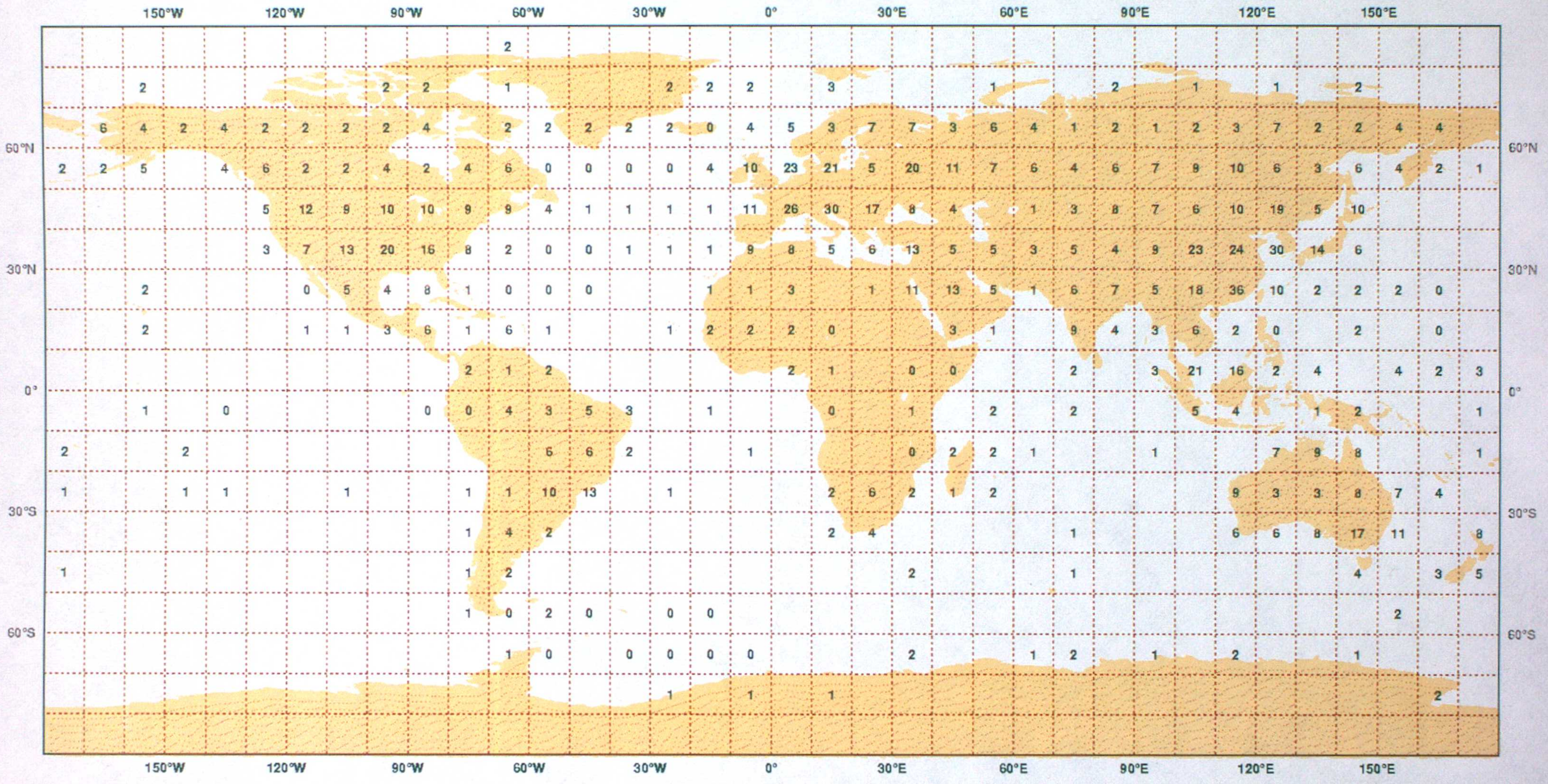

150°W 120°W 90°W 60°W 30°W 0° 30°E 60°E 90°E 120°E 150°E
60°N
30°N
0°
30°S
60°S
2
2 2 2 1 2 2 2 3 1 2 1 1 2
6 4 2 4 2 2 2 2 4 2 2 2 2 2 0 4 5 3 7 7 3 6 4 1 2 1 2 3 7 2 2 4 4
2 2 5 4 6 2 2 4 2 4 6 0 0 0 0 4 10 23 21 5 20 11 7 6 4 6 7 9 10 6 3 6 4 2 1
5 12 9 10 10 9 9 4 1 1 1 1 11 26 30 17 8 4 1 3 8 7 6 10 19 5 10
3 7 13 20 16 8 2 0 0 1 1 1 9 8 5 6 13 5 5 3 5 4 9 23 24 30 14 6
2 0 5 4 8 1 0 0 0 1 1 3 1 11 13 5 1 6 7 5 18 36 10 2 2 2 0
2 1 1 3 6 1 6 1 1 2 2 2 0 3 1 9 4 3 6 2 0 2 0
2 1 2 2 1 0 0 2 3 21 16 2 4 4 2 3
1 0 0 0 4 3 5 3 1 0 1 2 2 5 4 1 2 1
2 2 6 6 2 1 0 2 2 1 1 7 9 8 1
1 1 1 1 1 1 10 13 1 2 6 2 1 2 9 3 3 8 7 4
1 4 2 2 4 1 6 6 8 17 11 8
1 1 2 2 1 4 3 5
1 0 2 0 0 0 2
1 0 0 0 0 0 2 1 2 1 2 1
1 1 1 2

TABLE 7

MONTHLY MONITORING OF RADIOSONDE OBSERVATIONS
MONITORING CENTRE: EXETER
MONTH: Jan 06

Monitoring procedures

Period		:One calendar month.
Data monitored		:Reports from each unique identifier for radiosonde TEMPs.
Area monitored		:90°N - 90°S, 180°W - 180°E.
Standard of comparison		:Background field from UKMO global model.
Observation times		:00 UTC and 12 UTC.
Level(s) monitored		:Standard levels between 500.0 - 150.0 hPa
Element monitored		:WIND DIRECTION in degrees
Parameters monitored		
	:NUM OBS	:Average number of observations at all levels.
	:BIAS	:Mean difference of observations from background values from all levels.
	:MAX SPREAD	:(For observation - background values) Maximum absolute difference of SD at any level from SD at all levels
	:SD	:SD of difference of observations from background values at all levels.

SELECTION CRITERIA :NUM OBS ≥ 5, and
ABSOLUTE BIAS ≥ 10°, with
SD < 30°, and
MAX SPREAD < 10°

WMO IDENT	OBS TIME	ELM	LAT/LONG	NUM OBS	BIAS	MAX SPREAD	SD
08594	12	DD	17/ -23	18	12.2	4.8	10.3
33791	12	DD	48/ 33	27	-13.6	2.9	8.7
34731	00	DD	47/ 40	21	12.2	5.3	18.2
34731	12	DD	47/ 40	19	15.0	9.4	16.3
42182	00	DD	29/ 77	30	18.3	4.2	8.2
42182	12	DD	29/ 77	30	16.6	5.9	9.7
48565	00	DD	8/ 98	21	11.0	3.8	12.3
58968	00	DD	25/ 122	31	17.3	2.3	4.6
58968	12	DD	25/ 122	31	17.5	1.7	4.2

MONITORING OF SATELLITE WINDS

MONITORING CENTRE: EXETER

MONTH: Jan 06

Monitoring procedures

Period :One calendar month.

Data monitored :Reports from GOES-9, GOES-10, GOES-12, METEOSAT-5, METEOSAT-7

Standard of comparison :Background field from UKMO global model.

Selection Criteria :number of observations > 10.

Data Extracted :Layer 701 - 1000 hPa
401 - 700 hPa
101 - 400 hPa

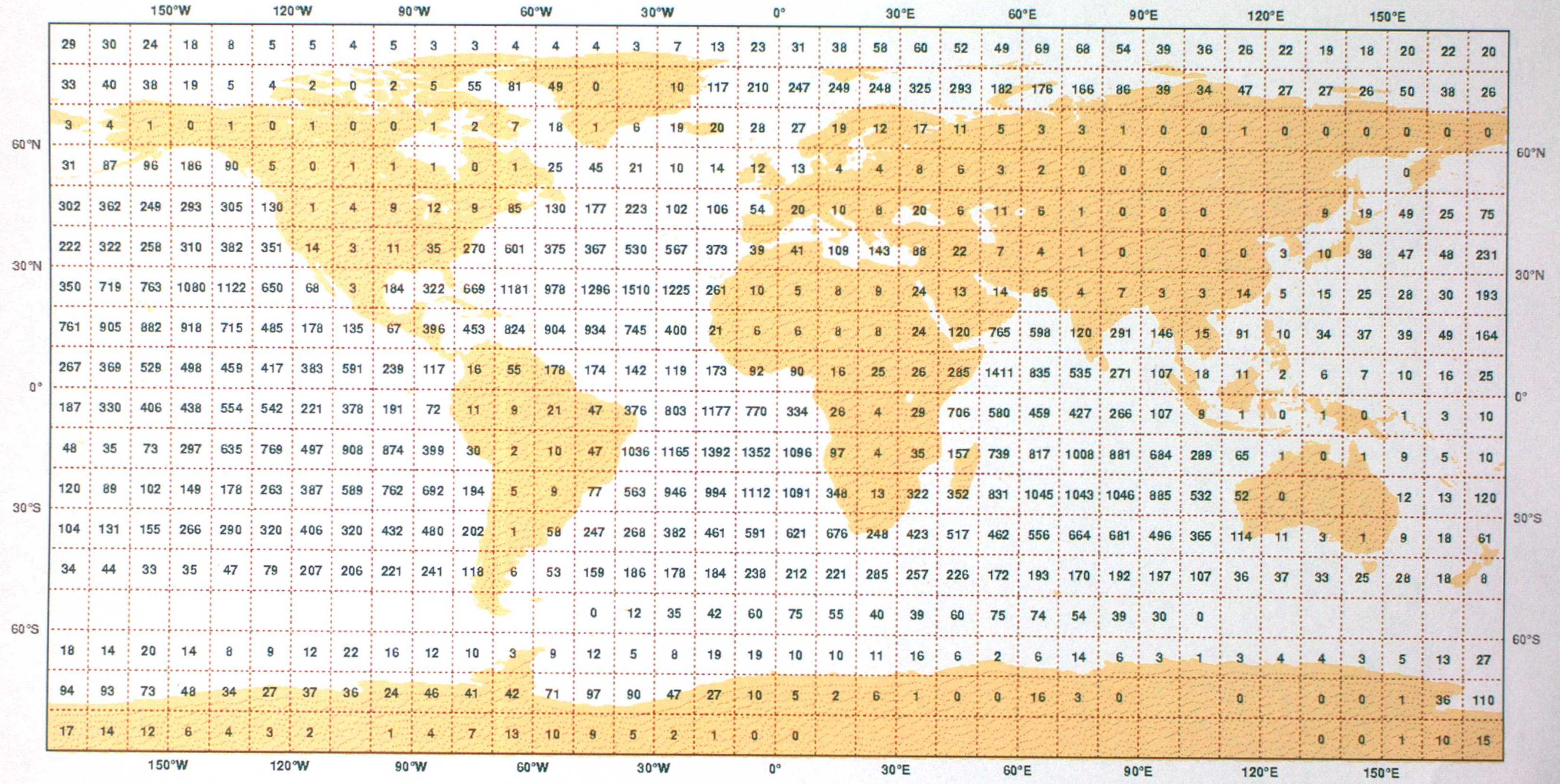
:Mean wind

:Mean observation minus background vector wind differences

:Mean observation minus background speed differences

:RMS of observation minus background vector differences

Figure 10. SATOB 701 - 1000 hPa mean daily count. JANUARY 2006
Global average number of observations in 24 hours = 104946



29	30	24	18	8	5	5	4	5	3	3	4	4	4	3	7	13	23	31	38	58	60	52	49	69	68	54	39	36	26	22	19	18	20	22	20
33	40	38	19	5	4	2	0	2	5	55	81	49	0		10	117	210	247	249	248	325	293	182	176	166	86	39	34	47	27	27	26	50	38	26
3	4	1	0	1	0	1	0	0	1	2	7	18	1	6	19	20	28	27	19	12	17	11	5	3	3	1	0	0	1	0	0	0	0	0	0
31	87	96	186	90	5	0	1	1	1	0	1	25	45	21	10	14	12	13	4	4	8	6	3	2	0	0	0						0		
302	362	249	293	305	130	1	4	9	12	9	85	130	177	223	102	106	54	20	10	8	20	6	11	6	1	0	0	0			9	19	49	25	75
222	322	258	310	382	351	14	3	11	35	270	601	375	367	530	567	373	39	41	109	143	88	22	7	4	1	0		0	0	3	10	38	47	48	231
350	719	763	1080	1122	650	68	3	184	322	669	1181	978	1296	1510	1225	261	10	5	8	9	24	13	14	85	4	7	3	3	14	5	15	25	28	30	193
761	905	882	918	715	485	178	135	67	396	453	824	904	934	745	400	21	6	6	8	8	24	120	765	598	120	291	146	15	91	10	34	37	39	49	164
267	369	529	498	459	417	383	591	239	117	16	55	178	174	142	119	173	92	90	16	25	26	285	1411	835	535	271	107	18	11	2	6	7	10	16	25
187	330	406	438	554	542	221	378	191	72	11	9	21	47	376	803	1177	770	334	26	4	29	706	580	459	427	266	107	9	1	0	1	0	1	3	10
48	35	73	297	635	769	497	908	874	399	30	2	10	47	1036	1165	1392	1352	1096	97	4	35	157	739	817	1008	881	684	289	65	1	0	1	9	5	10
120	89	102	149	178	263	387	589	762	692	194	5	9	77	563	946	994	1112	1091	348	13	322	352	831	1045	1043	1046	885	532	52	0			12	13	120
104	131	155	266	290	320	406	320	432	480	202	1	58	247	268	382	461	591	621	676	248	423	517	462	556	664	681	496	365	114	11	3	1	9	18	61
34	44	33	35	47	79	207	206	221	241	118	6	53	159	186	178	184	238	212	221	285	257	226	172	193	170	192	197	107	36	37	33	25	28	18	8
													0	12	35	42	60	75	55	40	39	60	75	74	54	39	30	0							
18	14	20	14	8	9	12	22	16	12	10	3	9	12	5	8	19	19	10	10	11	16	6	2	6	14	6	3	1	3	4	4	3	5	13	27
94	93	73	48	34	27	37	36	24	46	41	42	71	97	90	47	27	10	5	2	6	1	0	0	16	3	0			0		0	0	1	36	110
17	14	12	6	4	3	2		1	4	7	13	10	9	5	2	1	0	0													0	0	1	10	15

Figure 11. SATOB 701 - 1000 hPa vector mean wind. JANUARY 2006

All observations

Arrows are plotted where greater than 10 obs are present

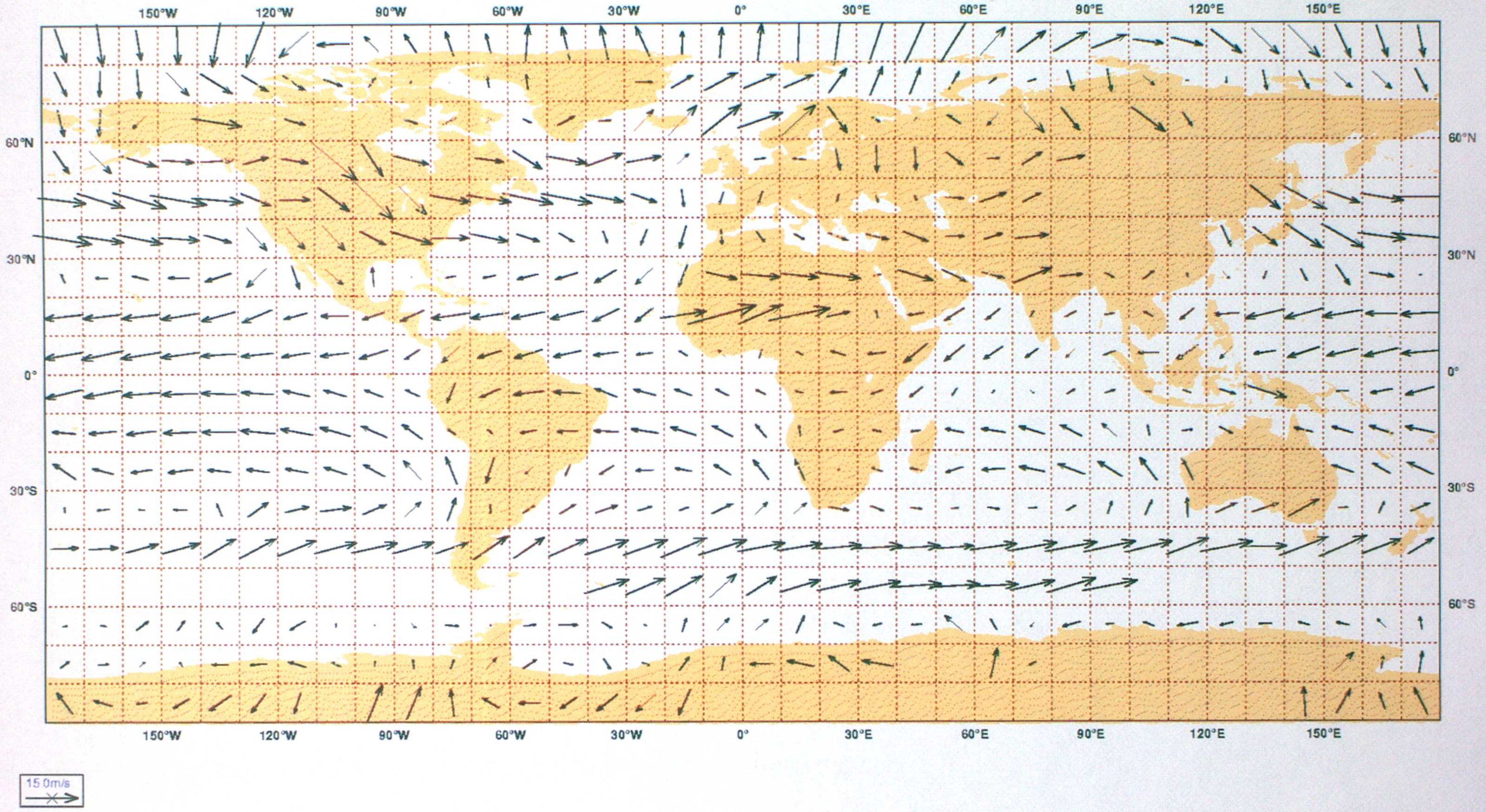

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
15.0m/s

Figure 12. SATOB 701 - 1000 hPa mean vector wind differences. JANUARY 2006
All observations
Arrows are plotted where greater than 10 obs are present

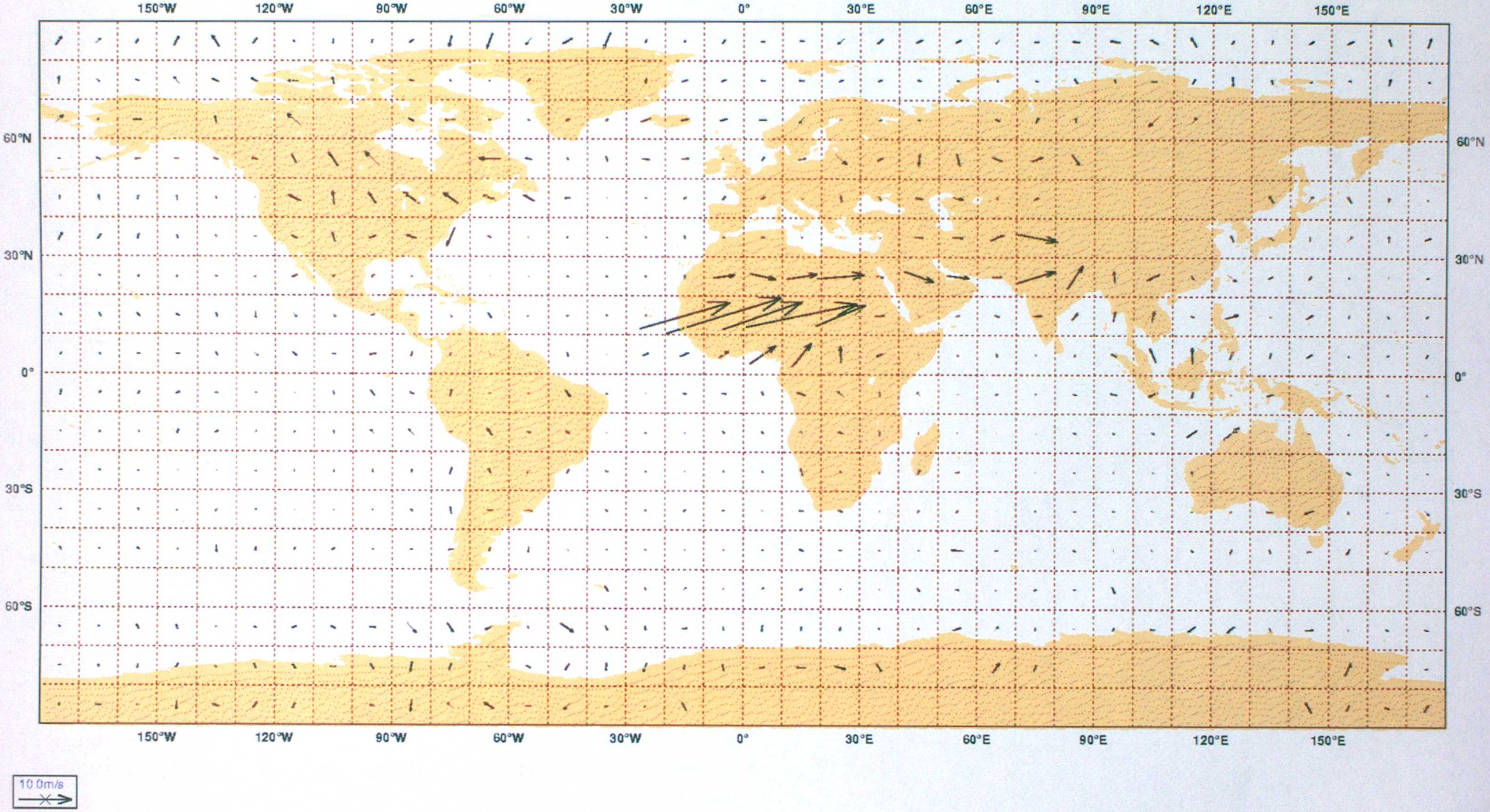
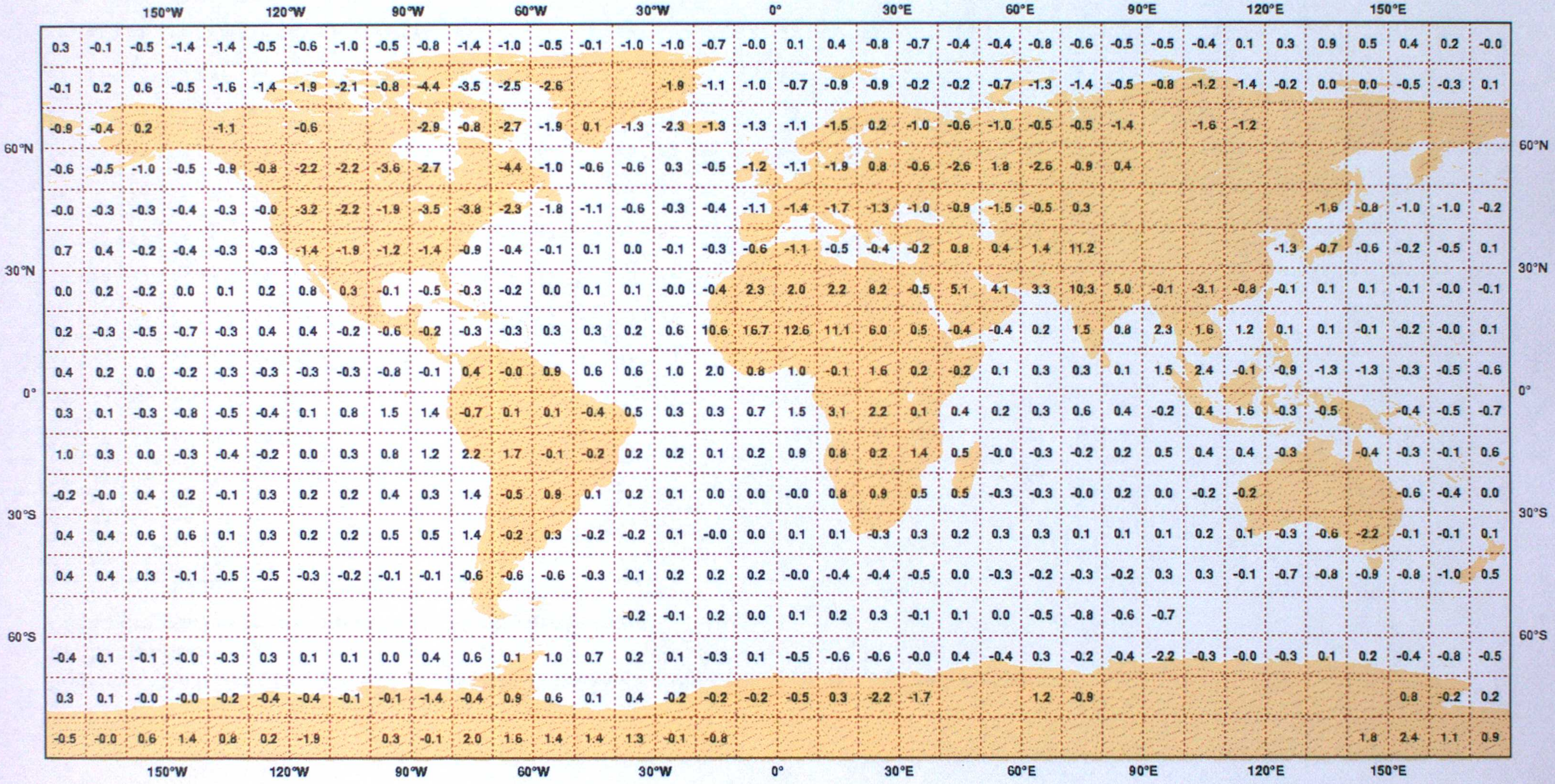

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
10.0m/s

Figure 13. SATOB 701 - 1000 hPa mean O-B speed differences (ms-1). JANUARY 2006

All observations

Values are plotted where greater than 10 obs are present

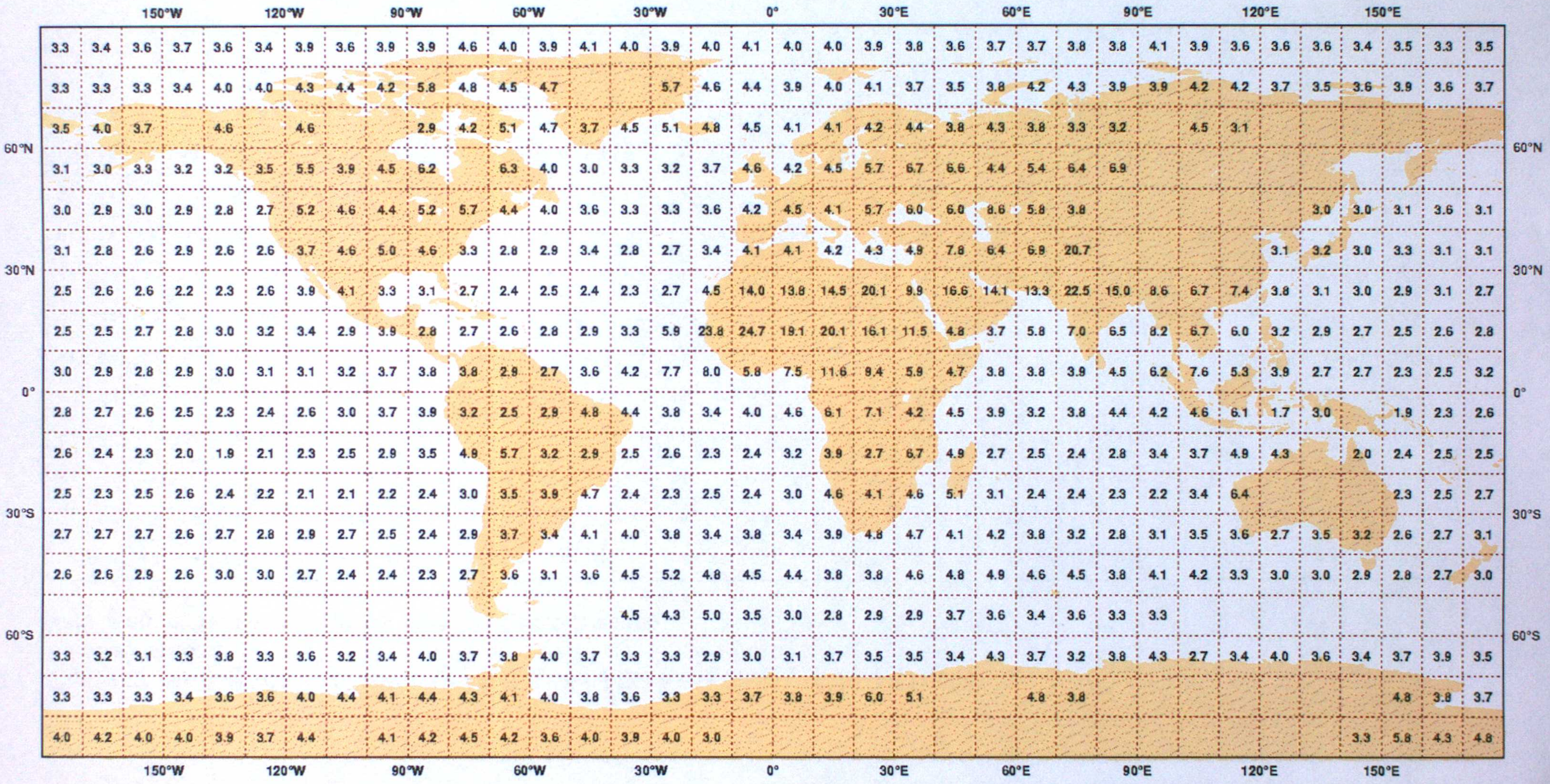


0.3	-0.1	-0.5	-1.4	-1.4	-0.5	-0.6	-1.0	-0.5	-0.8	-1.4	-1.0	-0.5	-0.1	-1.0	-1.0	-0.7	-0.0	0.1	0.4	-0.8	-0.7	-0.4	-0.4	-0.8	-0.6	-0.5	-0.5	-0.4	0.1	0.3	0.9	0.5	0.4	0.2	-0.0
-0.1	0.2	0.6	-0.5	-1.6	-1.4	-1.9	-2.1	-0.8	-4.4	-3.5	-2.5	-2.6			-1.9	-1.1	-1.0	-0.7	-0.9	-0.9	-0.2	-0.2	-0.7	-1.3	-1.4	-0.5	-0.8	-1.2	-1.4	-0.2	0.0	0.0	-0.5	-0.3	0.1
-0.9	-0.4	0.2		-1.1		-0.6			-2.9	-0.8	-2.7	-1.9	0.1	-1.3	-2.3	-1.3	-1.3	-1.1	-1.5	0.2	-1.0	-0.6	-1.0	-0.5	-0.5	-1.4		-1.6	-1.2						
-0.6	-0.5	-1.0	-0.5	-0.9	-0.8	-2.2	-2.2	-3.6	-2.7		-4.4	-1.0	-0.6	-0.6	0.3	-0.5	-1.2	-1.1	-1.9	0.8	-0.6	-2.6	1.8	-2.6	-0.9	0.4									
-0.0	-0.3	-0.3	-0.4	-0.3	-0.0	-3.2	-2.2	-1.9	-3.5	-3.8	-2.3	-1.8	-1.1	-0.6	-0.3	-0.4	-1.1	-1.4	-1.7	-1.3	-1.0	-0.9	-1.5	-0.5	0.3						-1.6	-0.8	-1.0	-1.0	-0.2
0.7	0.4	-0.2	-0.4	-0.3	-0.3	-1.4	-1.9	-1.2	-1.4	-0.9	-0.4	-0.1	0.1	0.0	-0.1	-0.3	-0.6	-1.1	-0.5	-0.4	-0.2	0.8	0.4	1.4	11.2					-1.3	-0.7	-0.6	-0.2	-0.5	0.1
0.0	0.2	-0.2	0.0	0.1	0.2	0.8	0.3	-0.1	-0.5	-0.3	-0.2	0.0	0.1	0.1	-0.0	-0.4	2.3	2.0	2.2	8.2	-0.5	5.1	4.1	3.3	10.3	5.0	-0.1	-3.1	-0.8	-0.1	0.1	0.1	-0.1	-0.0	-0.1
0.2	-0.3	-0.5	-0.7	-0.3	0.4	0.4	-0.2	-0.6	-0.2	-0.3	-0.3	0.3	0.3	0.2	0.6	10.6	16.7	12.6	11.1	6.0	0.5	-0.4	-0.4	0.2	1.5	0.8	2.3	1.6	1.2	0.1	0.1	-0.1	-0.2	-0.0	0.1
0.4	0.2	0.0	-0.2	-0.3	-0.3	-0.3	-0.3	-0.8	-0.1	0.4	-0.0	0.9	0.6	0.6	1.0	2.0	0.8	1.0	-0.1	1.6	0.2	-0.2	0.1	0.3	0.3	0.1	1.5	2.4	-0.1	-0.9	-1.3	-1.3	-0.3	-0.5	-0.6
0.3	0.1	-0.3	-0.8	-0.5	-0.4	0.1	0.8	1.5	1.4	-0.7	0.1	0.1	-0.4	0.5	0.3	0.3	0.7	1.5	3.1	2.2	0.1	0.4	0.2	0.3	0.6	0.4	-0.2	0.4	1.6	-0.3	-0.5		-0.4	-0.5	-0.7
1.0	0.3	0.0	-0.3	-0.4	-0.2	0.0	0.3	0.8	1.2	2.2	1.7	-0.1	-0.2	0.2	0.2	0.1	0.2	0.9	0.8	0.2	1.4	0.5	-0.0	-0.3	-0.2	0.2	0.5	0.4	0.4	-0.3		-0.4	-0.3	-0.1	0.6
-0.2	-0.0	0.4	0.2	-0.1	0.3	0.2	0.2	0.4	0.3	1.4	-0.5	0.9	0.1	0.2	0.1	0.0	0.0	-0.0	0.8	0.9	0.5	0.5	-0.3	-0.3	-0.0	0.2	0.0	-0.2	-0.2				-0.6	-0.4	0.0
0.4	0.4	0.6	0.6	0.1	0.3	0.2	0.2	0.5	0.5	1.4	-0.2	0.3	-0.2	-0.2	0.1	-0.0	0.0	0.1	0.1	-0.3	0.3	0.2	0.3	0.3	0.1	0.1	0.1	0.2	0.1	-0.3	-0.6	-2.2	-0.1	-0.1	0.1
0.4	0.4	0.3	-0.1	-0.5	-0.5	-0.3	-0.2	-0.1	-0.1	-0.6	-0.6	-0.6	-0.3	-0.1	0.2	0.2	0.2	-0.0	-0.4	-0.4	-0.5	0.0	-0.3	-0.2	-0.3	-0.2	0.3	0.3	-0.1	-0.7	-0.8	-0.9	-0.8	-1.0	0.5
														-0.2	-0.1	0.2	0.0	0.1	0.2	0.3	-0.1	0.1	0.0	-0.5	-0.8	-0.6	-0.7								
-0.4	0.1	-0.1	-0.0	-0.3	0.3	0.1	0.1	0.0	0.4	0.6	0.1	1.0	0.7	0.2	0.1	-0.3	0.1	-0.5	-0.6	-0.6	-0.0	0.4	-0.4	0.3	-0.2	-0.4	-2.2	-0.3	-0.0	-0.3	0.1	0.2	-0.4	-0.8	-0.5
0.3	0.1	-0.0	-0.0	-0.2	-0.4	-0.4	-0.1	-0.1	-1.4	-0.4	0.9	0.6	0.1	0.4	-0.2	-0.2	-0.2	-0.5	0.3	-2.2	-1.7			1.2	-0.9								0.8	-0.2	0.2
-0.5	-0.0	0.6	1.4	0.8	0.2	-1.9		0.3	-0.1	2.0	1.6	1.4	1.4	1.3	-0.1	-0.8																1.8	2.4	1.1	0.9

Figure 14. SATOB 701 - 1000 hPa mean RMS O-B vector differences (ms-1). JANUARY 2006

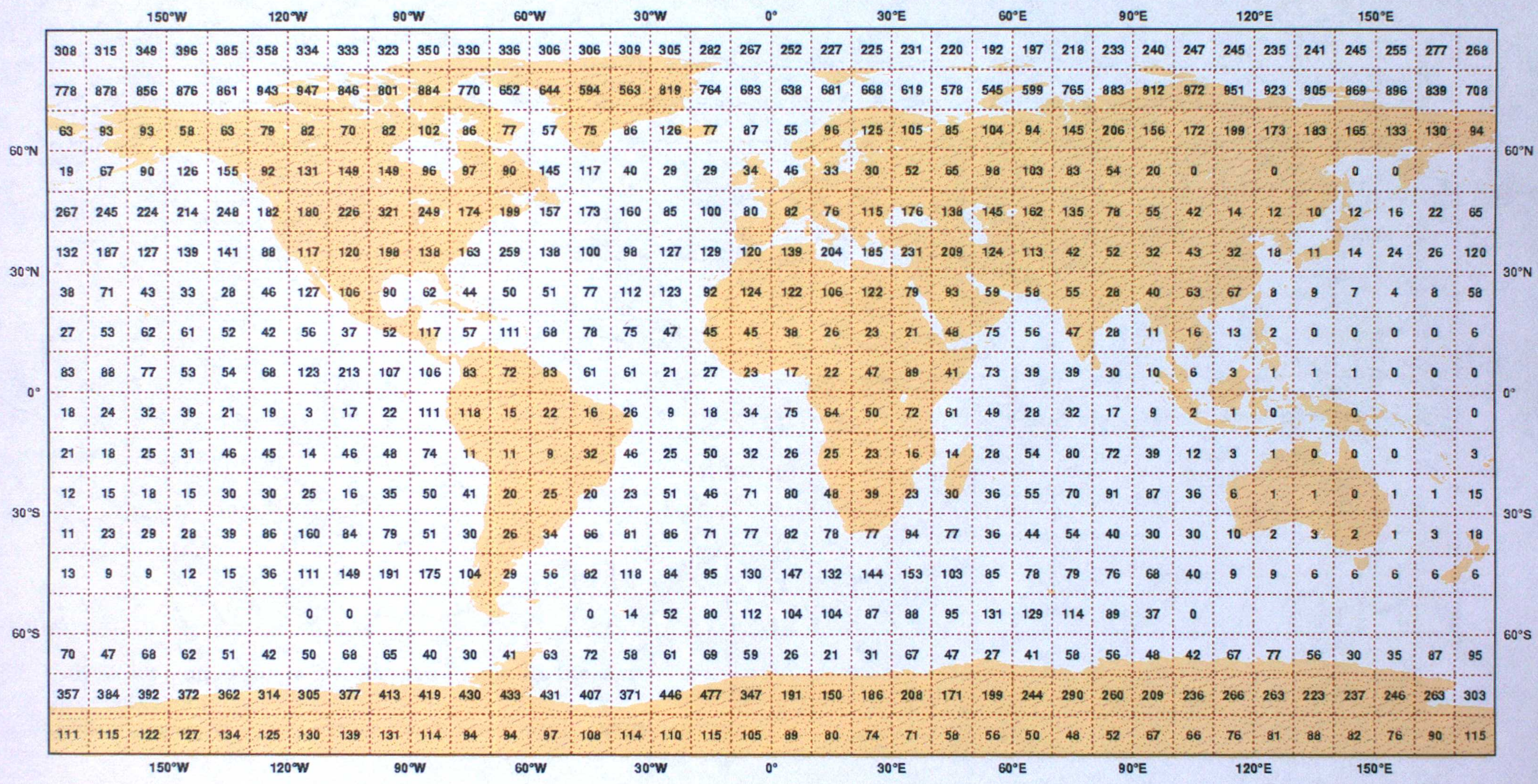
All observations

Values are plotted where greater than 10 obs are present



3.3	3.4	3.6	3.7	3.6	3.4	3.9	3.6	3.9	3.9	4.6	4.0	3.9	4.1	4.0	3.9	4.0	4.1	4.0	4.0	3.9	3.8	3.6	3.7	3.7	3.8	3.8	4.1	3.9	3.6	3.6	3.6	3.4	3.5	3.3	3.5
3.3	3.3	3.3	3.4	4.0	4.0	4.3	4.4	4.2	5.8	4.8	4.5	4.7			5.7	4.6	4.4	3.9	4.0	4.1	3.7	3.5	3.8	4.2	4.3	3.9	3.9	4.2	4.2	3.7	3.5	3.6	3.9	3.6	3.7
3.5	4.0	3.7		4.6		4.6			2.9	4.2	5.1	4.7	3.7	4.5	5.1	4.8	4.5	4.1	4.1	4.2	4.4	3.8	4.3	3.8	3.3	3.2		4.5	3.1						
3.1	3.0	3.3	3.2	3.2	3.5	5.5	3.9	4.5	6.2		6.3	4.0	3.0	3.3	3.2	3.7	4.6	4.2	4.5	5.7	6.7	6.6	4.4	5.4	6.4	6.9									
3.0	2.9	3.0	2.9	2.8	2.7	5.2	4.6	4.4	5.2	5.7	4.4	4.0	3.6	3.3	3.3	3.6	4.2	4.5	4.1	5.7	6.0	6.0	8.6	5.8	3.8						3.0	3.0	3.1	3.6	3.1
3.1	2.8	2.6	2.9	2.6	2.6	3.7	4.6	5.0	4.6	3.3	2.8	2.9	3.4	2.8	2.7	3.4	4.1	4.1	4.2	4.3	4.9	7.8	6.4	6.9	20.7					3.1	3.2	3.0	3.3	3.1	3.1
2.5	2.6	2.6	2.2	2.3	2.6	3.9	4.1	3.3	3.1	2.7	2.4	2.5	2.4	2.3	2.7	4.5	14.0	13.8	14.5	20.1	9.9	16.6	14.1	13.3	22.5	15.0	8.6	6.7	7.4	3.8	3.1	3.0	2.9	3.1	2.7
2.5	2.5	2.7	2.8	3.0	3.2	3.4	2.9	3.9	2.8	2.7	2.6	2.8	2.9	3.3	5.9	23.8	24.7	19.1	20.1	16.1	11.5	4.8	3.7	5.8	7.0	6.5	8.2	6.7	6.0	3.2	2.9	2.7	2.5	2.6	2.8
3.0	2.9	2.8	2.9	3.0	3.1	3.1	3.2	3.7	3.8	3.8	2.9	2.7	3.6	4.2	7.7	8.0	5.8	7.5	11.6	9.4	5.9	4.7	3.8	3.8	3.9	4.5	6.2	7.6	5.3	3.9	2.7	2.7	2.3	2.5	3.2
2.8	2.7	2.6	2.5	2.3	2.4	2.6	3.0	3.7	3.9	3.2	2.5	2.9	4.8	4.4	3.8	3.4	4.0	4.6	6.1	7.1	4.2	4.5	3.9	3.2	3.8	4.4	4.2	4.6	6.1	1.7	3.0		1.9	2.3	2.6
2.6	2.4	2.3	2.0	1.9	2.1	2.3	2.5	2.9	3.5	4.9	5.7	3.2	2.9	2.5	2.6	2.3	2.4	3.2	3.9	2.7	6.7	4.9	2.7	2.5	2.4	2.8	3.4	3.7	4.9	4.3		2.0	2.4	2.5	2.5
2.5	2.3	2.5	2.6	2.4	2.2	2.1	2.1	2.2	2.4	3.0	3.5	3.9	4.7	2.4	2.3	2.5	2.4	3.0	4.6	4.1	4.6	5.1	3.1	2.4	2.4	2.3	2.2	3.4	6.4				2.3	2.5	2.7
2.7	2.7	2.7	2.6	2.7	2.8	2.9	2.7	2.5	2.4	2.9	3.7	3.4	4.1	4.0	3.8	3.4	3.8	3.4	3.9	4.8	4.7	4.1	4.2	3.8	3.2	2.8	3.1	3.5	3.6	2.7	3.5	3.2	2.6	2.7	3.1
2.6	2.6	2.9	2.6	3.0	3.0	2.7	2.4	2.4	2.3	2.7	3.6	3.1	3.6	4.5	5.2	4.8	4.5	4.4	3.8	3.8	4.6	4.8	4.9	4.6	4.5	3.8	4.1	4.2	3.3	3.0	3.0	2.9	2.8	2.7	3.0
														4.5	4.3	5.0	3.5	3.0	2.8	2.9	2.9	3.7	3.6	3.4	3.6	3.3	3.3								
3.3	3.2	3.1	3.3	3.8	3.3	3.6	3.2	3.4	4.0	3.7	3.8	4.0	3.7	3.3	3.3	2.9	3.0	3.1	3.7	3.5	3.5	3.4	4.3	3.7	3.2	3.8	4.3	2.7	3.4	4.0	3.6	3.4	3.7	3.9	3.5
3.3	3.3	3.3	3.4	3.6	3.6	4.0	4.4	4.1	4.4	4.3	4.1	4.0	3.8	3.6	3.3	3.3	3.7	3.8	3.9	6.0	5.1			4.8	3.8								4.8	3.8	3.7
4.0	4.2	4.0	4.0	3.9	3.7	4.4		4.1	4.2	4.5	4.2	3.6	4.0	3.9	4.0	3.0																3.3	5.8	4.3	4.8

Figure 15. SATOB 401 - 700 hPa mean daily count. JANUARY 2006
Global average number of observations in 24 hours = 84203



308	315	349	396	385	358	334	333	323	350	330	336	306	306	309	305	282	267	252	227	225	231	220	192	197	218	233	240	247	245	235	241	245	255	277	268
778	878	856	876	861	943	947	846	801	884	770	652	644	594	563	819	764	693	638	681	668	619	578	545	599	765	883	912	972	951	923	905	869	896	839	708
63	93	93	58	63	79	82	70	82	102	86	77	57	75	86	126	77	87	55	96	125	105	85	104	94	145	206	156	172	199	173	183	165	133	130	94
19	67	90	126	155	92	131	149	149	96	97	90	145	117	40	29	29	34	46	33	30	52	65	98	103	83	54	20	0		0		0	0		
267	245	224	214	248	182	180	226	321	249	174	199	157	173	160	85	100	80	82	76	115	176	138	145	162	135	78	55	42	14	12	10	12	16	22	65
132	187	127	139	141	88	117	120	198	138	163	259	138	100	98	127	129	120	139	204	185	231	209	124	113	42	52	32	43	32	18	11	14	24	26	120
38	71	43	33	28	46	127	106	90	62	44	50	51	77	112	123	92	124	122	106	122	79	93	59	58	55	28	40	63	67	8	9	7	4	8	58
27	53	62	61	52	42	56	37	52	117	57	111	68	78	75	47	45	45	38	26	23	21	48	75	56	47	28	11	16	13	2	0	0	0	0	6
83	88	77	53	54	68	123	213	107	106	83	72	83	61	61	21	27	23	17	22	47	89	41	73	39	39	30	10	6	3	1	1	1	0	0	0
18	24	32	39	21	19	3	17	22	111	118	15	22	16	26	9	18	34	75	64	50	72	61	49	28	32	17	9	2	1	0		0			0
21	18	25	31	46	45	14	46	48	74	11	11	9	32	46	25	50	32	26	25	23	16	14	28	54	80	72	39	12	3	1	0	0	0		3
12	15	18	15	30	30	25	16	35	50	41	20	25	20	23	51	46	71	80	48	39	23	30	36	55	70	91	87	36	6	1	1	0	1	1	15
11	23	29	28	39	86	160	84	79	51	30	26	34	66	81	86	71	77	82	78	77	94	77	36	44	54	40	30	30	10	2	3	2	1	3	18
13	9	9	12	15	36	111	149	191	175	104	29	56	82	118	84	95	130	147	132	144	153	103	85	78	79	76	68	40	9	9	6	6	6	6	6
						0	0						0	14	52	80	112	104	104	87	88	95	131	129	114	89	37	0							
70	47	68	62	51	42	50	68	65	40	30	41	63	72	58	61	69	59	26	21	31	67	47	27	41	58	56	48	42	67	77	56	30	35	87	95
357	384	392	372	362	314	305	377	413	419	430	433	431	407	371	446	477	347	191	150	186	208	171	199	244	290	260	209	236	266	263	223	237	246	263	303
111	115	122	127	134	125	130	139	131	114	94	94	97	108	114	110	115	105	89	80	74	71	58	56	50	48	52	67	66	76	81	88	82	76	90	115

Figure 16. SATOB 401 - 700 hPa vector mean wind. JANUARY 2006
All observations
Arrows are plotted where greater than 10 obs are present

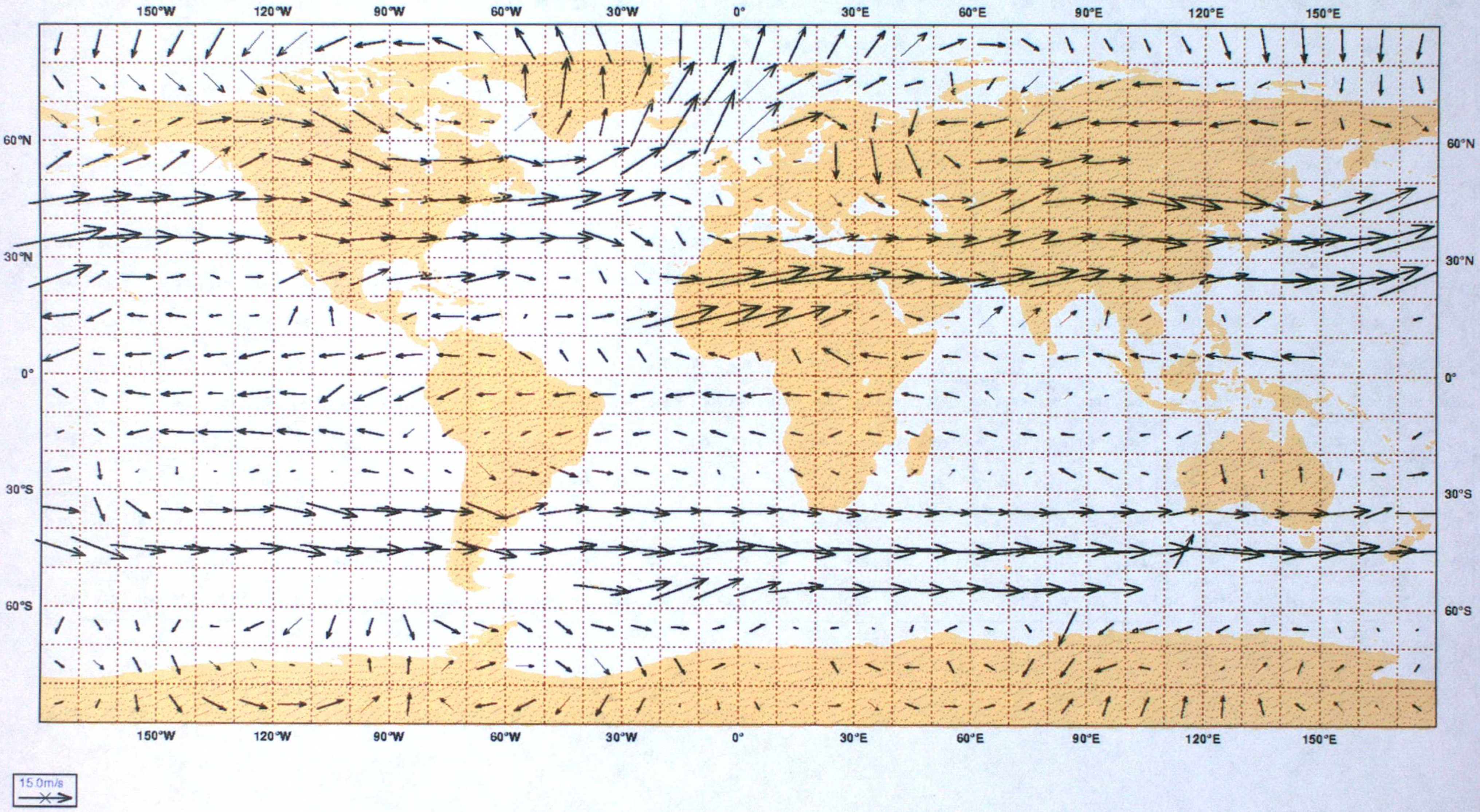

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
15.0m/s

Figure 17. SATOB 401 - 700 hPa mean vector wind differences. JANUARY 2006
All observations
Arrows are plotted where greater than 10 obs are present

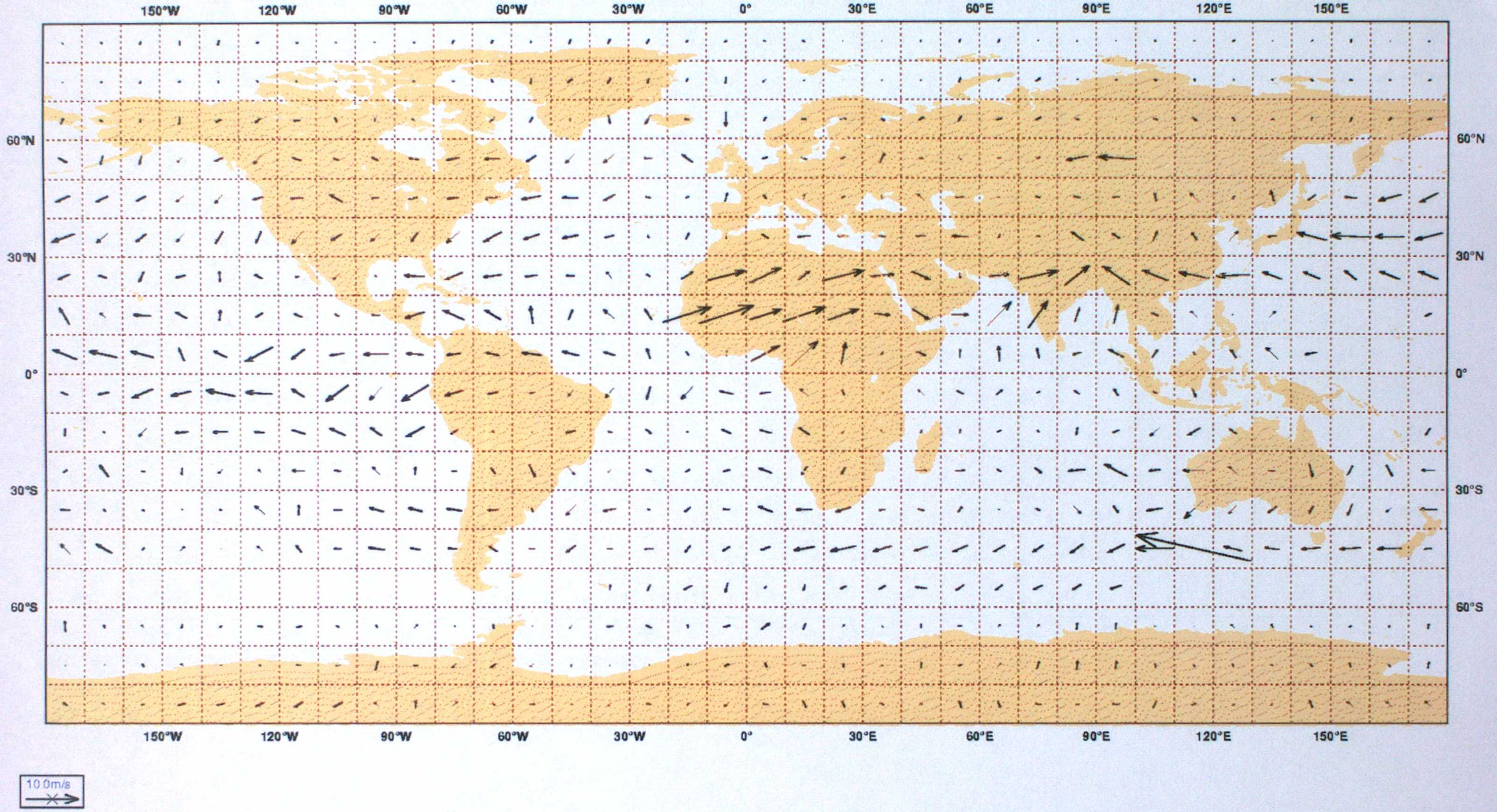
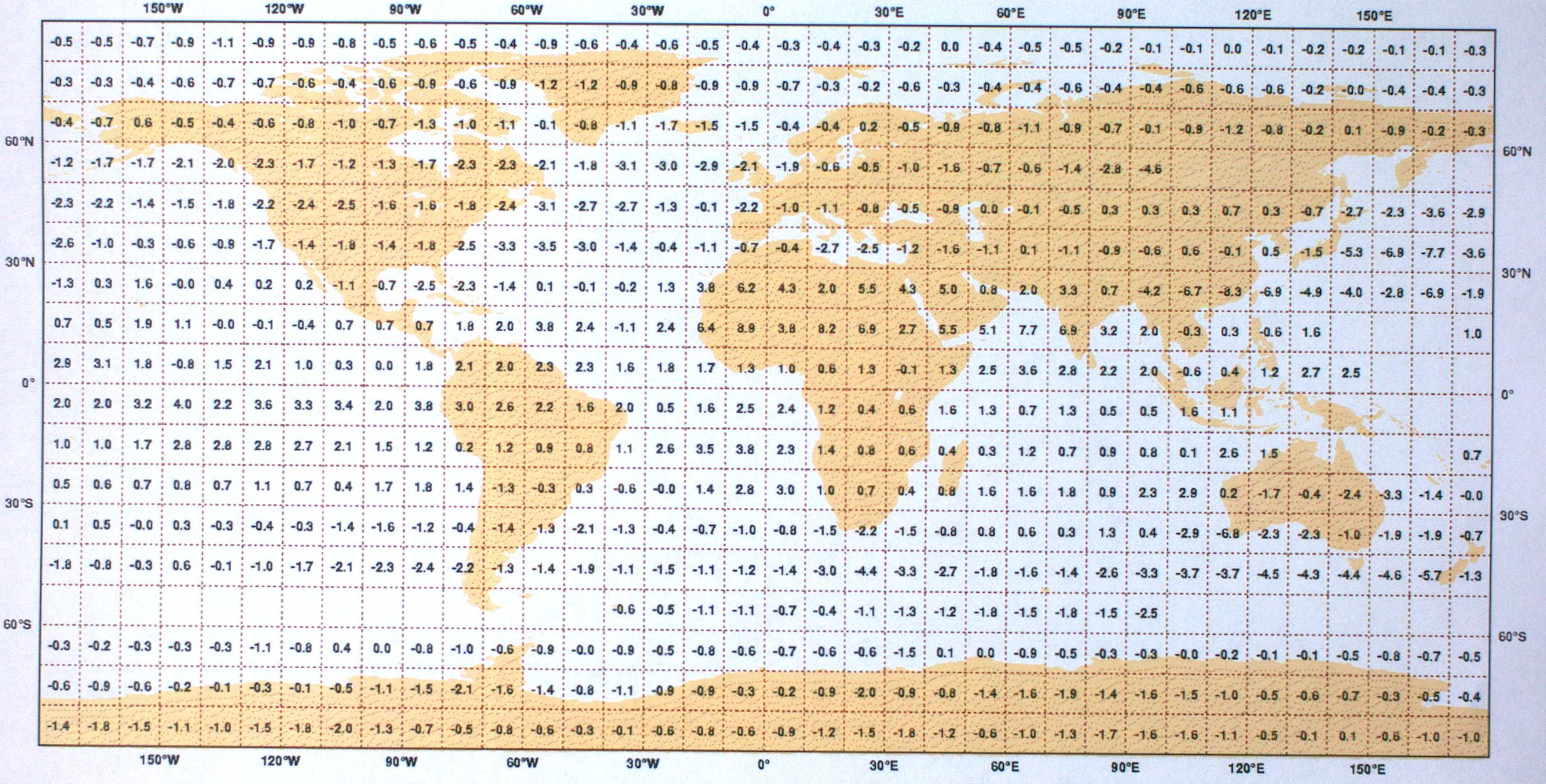

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
10.0m/s

Figure 18. SATOB 401 - 700 hPa mean O-B speed differences (ms-1). JANUARY 2006

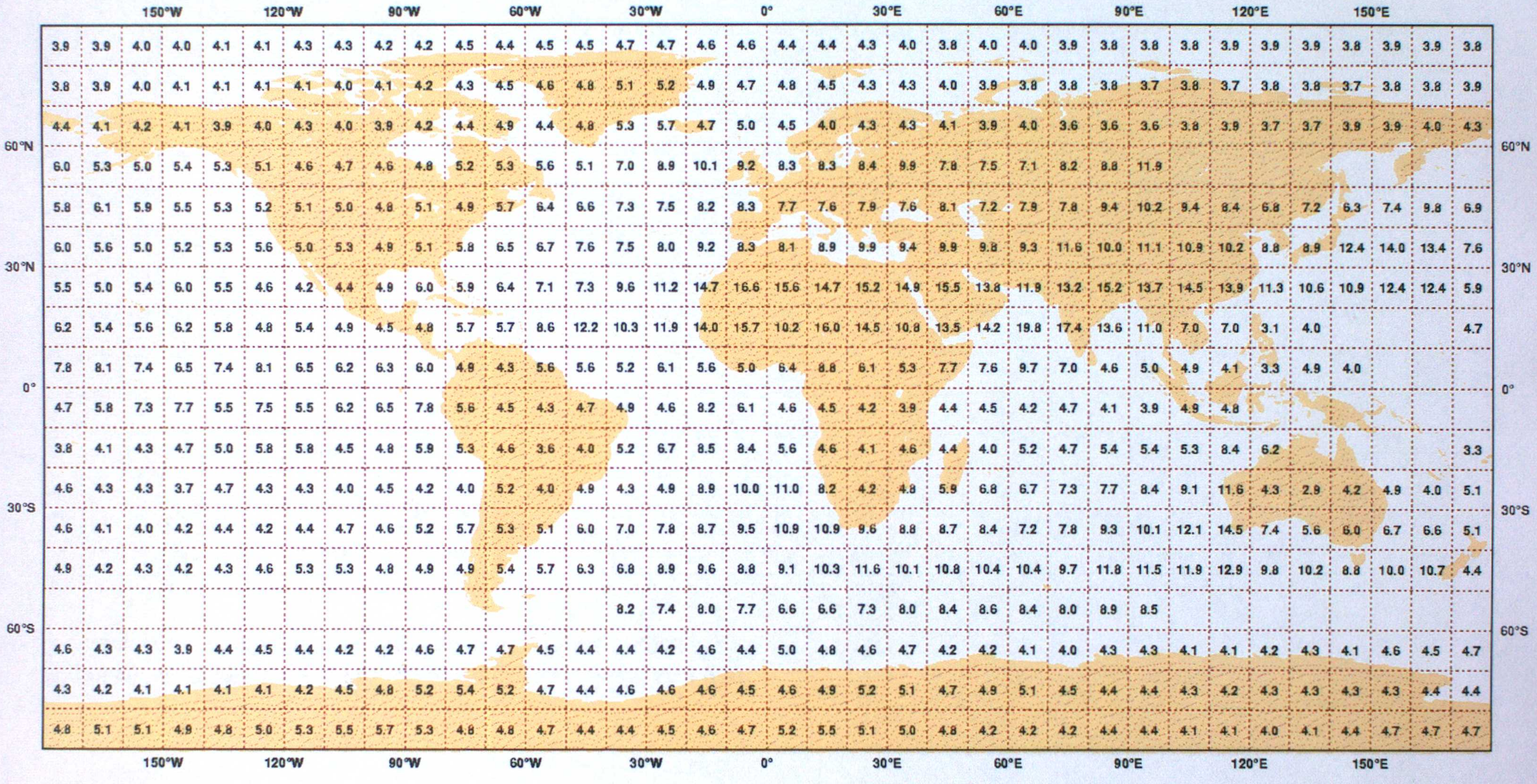
All observations

Values are plotted where greater than 10 obs are present



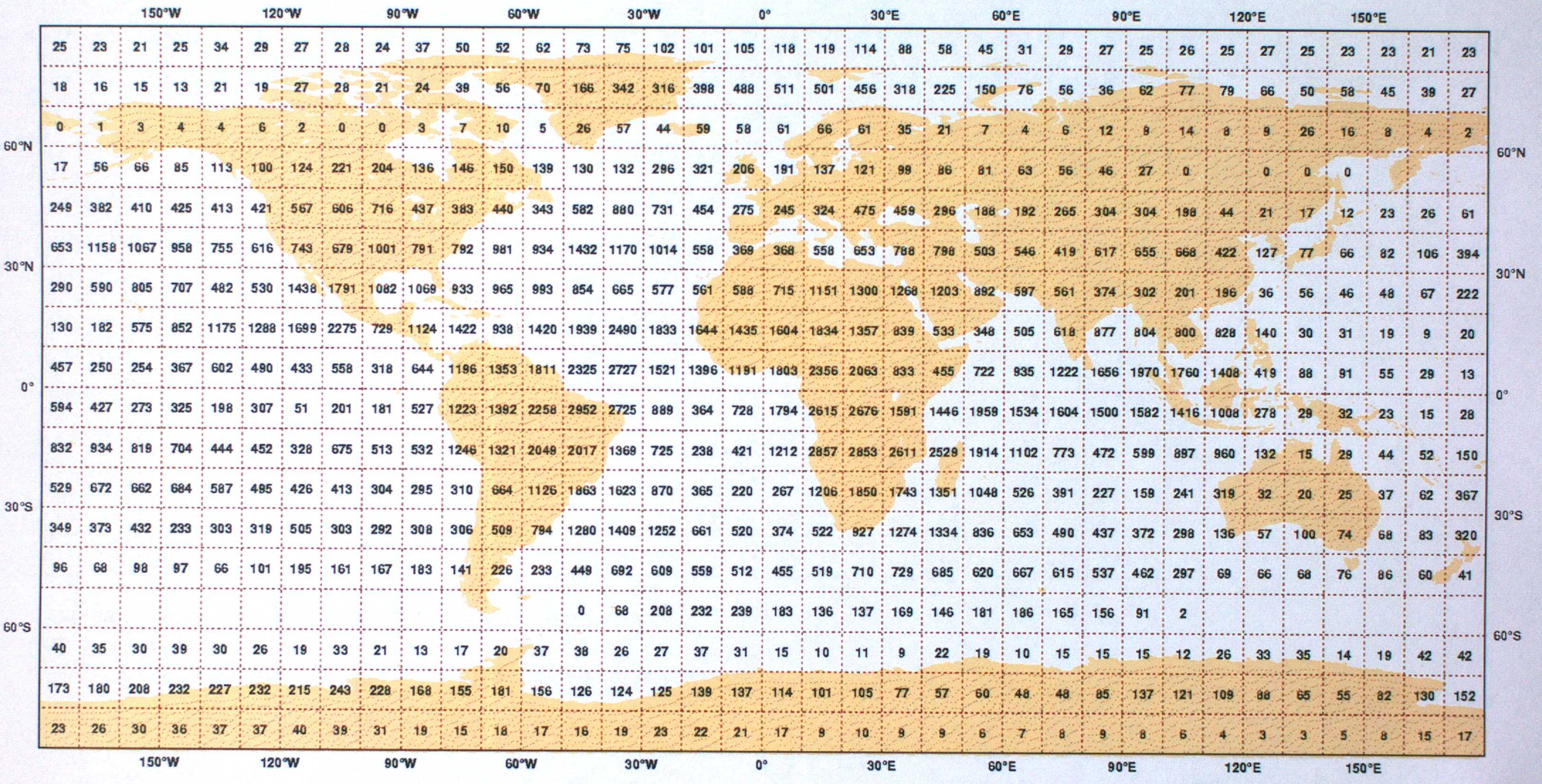
-0.5	-0.5	-0.7	-0.9	-1.1	-0.9	-0.9	-0.8	-0.5	-0.6	-0.5	-0.4	-0.9	-0.6	-0.4	-0.6	-0.5	-0.4	-0.3	-0.4	-0.3	-0.2	0.0	-0.4	-0.5	-0.5	-0.2	-0.1	-0.1	0.0	-0.1	-0.2	-0.2	-0.1	-0.1	-0.3
-0.3	-0.3	-0.4	-0.6	-0.7	-0.7	-0.6	-0.4	-0.6	-0.9	-0.6	-0.9	-1.2	-1.2	-0.9	-0.8	-0.9	-0.9	-0.7	-0.3	-0.2	-0.6	-0.3	-0.4	-0.4	-0.6	-0.4	-0.4	-0.6	-0.6	-0.6	-0.2	-0.0	-0.4	-0.4	-0.3
-0.4	-0.7	0.6	-0.5	-0.4	-0.6	-0.8	-1.0	-0.7	-1.3	-1.0	-1.1	-0.1	-0.8	-1.1	-1.7	-1.5	-1.5	-0.4	-0.4	0.2	-0.5	-0.9	-0.8	-1.1	-0.9	-0.7	-0.1	-0.9	-1.2	-0.8	-0.2	0.1	-0.9	-0.2	-0.3
-1.2	-1.7	-1.7	-2.1	-2.0	-2.3	-1.7	-1.2	-1.3	-1.7	-2.3	-2.3	-2.1	-1.8	-3.1	-3.0	-2.9	-2.1	-1.9	-0.6	-0.5	-1.0	-1.6	-0.7	-0.6	-1.4	-2.8	-4.6								
-2.3	-2.2	-1.4	-1.5	-1.8	-2.2	-2.4	-2.5	-1.6	-1.6	-1.8	-2.4	-3.1	-2.7	-2.7	-1.3	-0.1	-2.2	-1.0	-1.1	-0.8	-0.5	-0.9	0.0	-0.1	-0.5	0.3	0.3	0.3	0.7	0.3	-0.7	-2.7	-2.3	-3.6	-2.9
-2.6	-1.0	-0.3	-0.6	-0.9	-1.7	-1.4	-1.8	-1.4	-1.8	-2.5	-3.3	-3.5	-3.0	-1.4	-0.4	-1.1	-0.7	-0.4	-2.7	-2.5	-1.2	-1.6	-1.1	0.1	-1.1	-0.9	-0.6	0.6	-0.1	0.5	-1.5	-5.3	-6.9	-7.7	-3.6
-1.3	0.3	1.6	-0.0	0.4	0.2	0.2	-1.1	-0.7	-2.5	-2.3	-1.4	0.1	-0.1	-0.2	1.3	3.8	6.2	4.3	2.0	5.5	4.3	5.0	0.8	2.0	3.3	0.7	-4.2	-6.7	-8.3	-6.9	-4.9	-4.0	-2.8	-6.9	-1.9
0.7	0.5	1.9	1.1	-0.0	-0.1	-0.4	0.7	0.7	0.7	1.8	2.0	3.8	2.4	-1.1	2.4	6.4	8.9	3.8	8.2	6.9	2.7	5.5	5.1	7.7	6.9	3.2	2.0	-0.3	0.3	-0.6	1.6				1.0
2.9	3.1	1.8	-0.8	1.5	2.1	1.0	0.3	0.0	1.8	2.1	2.0	2.3	2.3	1.6	1.8	1.7	1.3	1.0	0.6	1.3	-0.1	1.3	2.5	3.6	2.8	2.2	2.0	-0.6	0.4	1.2	2.7	2.5			
2.0	2.0	3.2	4.0	2.2	3.6	3.3	3.4	2.0	3.8	3.0	2.6	2.2	1.6	2.0	0.5	1.6	2.5	2.4	1.2	0.4	0.6	1.6	1.3	0.7	1.3	0.5	0.5	1.6	1.1						
1.0	1.0	1.7	2.8	2.8	2.8	2.7	2.1	1.5	1.2	0.2	1.2	0.9	0.8	1.1	2.6	3.5	3.8	2.3	1.4	0.8	0.6	0.4	0.3	1.2	0.7	0.9	0.8	0.1	2.6	1.5					0.7
0.5	0.6	0.7	0.8	0.7	1.1	0.7	0.4	1.7	1.8	1.4	-1.3	-0.3	0.3	-0.6	-0.0	1.4	2.8	3.0	1.0	0.7	0.4	0.8	1.6	1.6	1.8	0.9	2.3	2.9	0.2	-1.7	-0.4	-2.4	-3.3	-1.4	-0.0
0.1	0.5	-0.0	0.3	-0.3	-0.4	-0.3	-1.4	-1.6	-1.2	-0.4	-1.4	-1.3	-2.1	-1.3	-0.4	-0.7	-1.0	-0.8	-1.5	-2.2	-1.5	-0.8	0.8	0.6	0.3	1.3	0.4	-2.9	-6.8	-2.3	-2.3	-1.0	-1.9	-1.9	-0.7
-1.8	-0.8	-0.3	0.6	-0.1	-1.0	-1.7	-2.1	-2.3	-2.4	-2.2	-1.3	-1.4	-1.9	-1.1	-1.5	-1.1	-1.2	-1.4	-3.0	-4.4	-3.3	-2.7	-1.8	-1.6	-1.4	-2.6	-3.3	-3.7	-3.7	-4.5	-4.3	-4.4	-4.6	-5.7	-1.3
														-0.6	-0.5	-1.1	-1.1	-0.7	-0.4	-1.1	-1.3	-1.2	-1.8	-1.5	-1.8	-1.5	-2.5								
-0.3	-0.2	-0.3	-0.3	-0.3	-1.1	-0.8	0.4	0.0	-0.8	-1.0	-0.6	-0.9	-0.0	-0.9	-0.5	-0.8	-0.6	-0.7	-0.6	-0.6	-1.5	0.1	0.0	-0.9	-0.5	-0.3	-0.3	-0.0	-0.2	-0.1	-0.1	-0.5	-0.8	-0.7	-0.5
-0.6	-0.9	-0.6	-0.2	-0.1	-0.3	-0.1	-0.5	-1.1	-1.5	-2.1	-1.6	-1.4	-0.8	-1.1	-0.9	-0.9	-0.3	-0.2	-0.9	-2.0	-0.9	-0.8	-1.4	-1.6	-1.9	-1.4	-1.6	-1.5	-1.0	-0.5	-0.6	-0.7	-0.3	-0.5	-0.4
-1.4	-1.8	-1.5	-1.1	-1.0	-1.5	-1.8	-2.0	-1.3	-0.7	-0.5	-0.8	-0.6	-0.3	-0.1	-0.6	-0.8	-0.6	-0.9	-1.2	-1.5	-1.8	-1.2	-0.6	-1.0	-1.3	-1.7	-1.6	-1.6	-1.1	-0.5	-0.1	0.1	-0.6	-1.0	-1.0

Figure 19. SATOB 401 - 700 hPa mean RMS O-B vector differences (ms-1). JANUARY 2006
All observations
Values are plotted where greater than 10 obs are present



3.9	3.9	4.0	4.0	4.1	4.1	4.3	4.3	4.2	4.2	4.5	4.4	4.5	4.5	4.7	4.7	4.6	4.6	4.4	4.4	4.3	4.0	3.8	4.0	4.0	3.9	3.8	3.8	3.8	3.9	3.9	3.9	3.8	3.9	3.9	3.8
3.8	3.9	4.0	4.1	4.1	4.1	4.1	4.0	4.1	4.2	4.3	4.5	4.6	4.8	5.1	5.2	4.9	4.7	4.8	4.5	4.3	4.3	4.0	3.9	3.8	3.8	3.8	3.7	3.8	3.7	3.8	3.8	3.7	3.8	3.8	3.9
4.4	4.1	4.2	4.1	3.9	4.0	4.3	4.0	3.9	4.2	4.4	4.9	4.4	4.8	5.3	5.7	4.7	5.0	4.5	4.0	4.3	4.3	4.1	3.9	4.0	3.6	3.6	3.6	3.8	3.9	3.7	3.7	3.9	3.9	4.0	4.3
6.0	5.3	5.0	5.4	5.3	5.1	4.6	4.7	4.6	4.8	5.2	5.3	5.6	5.1	7.0	8.9	10.1	9.2	8.3	8.3	8.4	9.9	7.8	7.5	7.1	8.2	8.8	11.9								
5.8	6.1	5.9	5.5	5.3	5.2	5.1	5.0	4.8	5.1	4.9	5.7	6.4	6.6	7.3	7.5	8.2	8.3	7.7	7.6	7.9	7.6	8.1	7.2	7.9	7.8	9.4	10.2	9.4	8.4	6.8	7.2	6.3	7.4	9.8	6.9
6.0	5.6	5.0	5.2	5.3	5.6	5.0	5.3	4.9	5.1	5.8	6.5	6.7	7.6	7.5	8.0	9.2	8.3	8.1	8.9	9.9	9.4	9.9	9.8	9.3	11.6	10.0	11.1	10.9	10.2	8.8	8.9	12.4	14.0	13.4	7.6
5.5	5.0	5.4	6.0	5.5	4.6	4.2	4.4	4.9	6.0	5.9	6.4	7.1	7.3	9.6	11.2	14.7	16.6	15.6	14.7	15.2	14.9	15.5	13.8	11.9	13.2	15.2	13.7	14.5	13.9	11.3	10.6	10.9	12.4	12.4	5.9
6.2	5.4	5.6	6.2	5.8	4.8	5.4	4.9	4.5	4.8	5.7	5.7	8.6	12.2	10.3	11.9	14.0	15.7	10.2	16.0	14.5	10.8	13.5	14.2	19.8	17.4	13.6	11.0	7.0	7.0	3.1	4.0				4.7
7.8	8.1	7.4	6.5	7.4	8.1	6.5	6.2	6.3	6.0	4.9	4.3	5.6	5.6	5.2	6.1	5.6	5.0	6.4	8.8	6.1	5.3	7.7	7.6	9.7	7.0	4.6	5.0	4.9	4.1	3.3	4.9	4.0			
4.7	5.8	7.3	7.7	5.5	7.5	5.5	6.2	6.5	7.8	5.6	4.5	4.3	4.7	4.9	4.6	8.2	6.1	4.6	4.5	4.2	3.9	4.4	4.5	4.2	4.7	4.1	3.9	4.9	4.8						
3.8	4.1	4.3	4.7	5.0	5.8	5.8	4.5	4.8	5.9	5.3	4.6	3.6	4.0	5.2	6.7	8.5	8.4	5.6	4.6	4.1	4.6	4.4	4.0	5.2	4.7	5.4	5.4	5.3	8.4	6.2					3.3
4.6	4.3	4.3	3.7	4.7	4.3	4.3	4.0	4.5	4.2	4.0	5.2	4.0	4.9	4.3	4.9	8.9	10.0	11.0	8.2	4.2	4.8	5.9	6.8	6.7	7.3	7.7	8.4	9.1	11.6	4.3	2.9	4.2	4.9	4.0	5.1
4.6	4.1	4.0	4.2	4.4	4.2	4.4	4.7	4.6	5.2	5.7	5.3	5.1	6.0	7.0	7.8	8.7	9.5	10.9	10.9	9.6	8.8	8.7	8.4	7.2	7.8	9.3	10.1	12.1	14.5	7.4	5.6	6.0	6.7	6.6	5.1
4.9	4.2	4.3	4.2	4.3	4.6	5.3	5.3	4.8	4.9	4.9	5.4	5.7	6.3	6.8	8.9	9.6	8.8	9.1	10.3	11.6	10.1	10.8	10.4	10.4	9.7	11.8	11.5	11.9	12.9	9.8	10.2	8.8	10.0	10.7	4.4
														8.2	7.4	8.0	7.7	6.6	6.6	7.3	8.0	8.4	8.6	8.4	8.0	8.9	8.5								
4.6	4.3	4.3	3.9	4.4	4.5	4.4	4.2	4.2	4.6	4.7	4.7	4.5	4.4	4.4	4.2	4.6	4.4	5.0	4.8	4.6	4.7	4.2	4.2	4.1	4.0	4.3	4.3	4.1	4.1	4.2	4.3	4.1	4.6	4.5	4.7
4.3	4.2	4.1	4.1	4.1	4.1	4.2	4.5	4.8	5.2	5.4	5.2	4.7	4.4	4.6	4.6	4.6	4.5	4.6	4.9	5.2	5.1	4.7	4.9	5.1	4.5	4.4	4.4	4.3	4.2	4.3	4.3	4.3	4.3	4.4	4.4
4.8	5.1	5.1	4.9	4.8	5.0	5.3	5.5	5.7	5.3	4.8	4.8	4.7	4.4	4.4	4.5	4.6	4.7	5.2	5.5	5.1	5.0	4.8	4.2	4.2	4.2	4.4	4.4	4.1	4.1	4.0	4.1	4.4	4.7	4.7	4.7

Figure 20. SATOB 101 - 400 hPa mean daily count. JANUARY 2006
Global average number of observations in 24 hours = 272963



25	23	21	25	34	29	27	28	24	37	50	52	62	73	75	102	101	105	118	119	114	88	58	45	31	29	27	25	26	25	27	25	23	23	21	23
18	16	15	13	21	19	27	28	21	24	39	56	70	166	342	316	398	488	511	501	456	318	225	150	76	56	36	62	77	79	66	50	58	45	39	27
0	1	3	4	4	6	2	0	0	3	7	10	5	26	57	44	59	58	61	66	61	35	21	7	4	6	12	9	14	8	9	26	16	8	4	2
17	56	66	85	113	100	124	221	204	136	146	150	139	130	132	296	321	206	191	137	121	99	86	81	63	56	46	27	0		0	0	0			
249	382	410	425	413	421	567	606	716	437	383	440	343	582	880	731	454	275	245	324	475	459	296	188	192	265	304	304	198	44	21	17	12	23	26	61
653	1158	1067	958	755	616	743	679	1001	791	792	981	934	1432	1170	1014	558	369	368	558	653	788	798	503	546	419	617	655	668	422	127	77	66	82	106	394
290	590	805	707	482	530	1438	1791	1082	1069	933	965	993	854	665	577	561	588	715	1151	1300	1268	1203	892	597	561	374	302	201	196	36	56	46	48	67	222
130	182	575	852	1175	1288	1699	2275	729	1124	1422	938	1420	1939	2490	1833	1644	1435	1604	1834	1357	839	533	348	505	618	877	804	800	828	140	30	31	19	9	20
457	250	254	367	602	490	433	558	318	644	1196	1353	1811	2325	2727	1521	1396	1191	1803	2356	2063	833	455	722	935	1222	1656	1970	1760	1408	419	88	91	55	29	13
594	427	273	325	198	307	51	201	181	527	1223	1392	2258	2952	2725	889	364	728	1794	2615	2676	1591	1446	1959	1534	1604	1500	1582	1416	1008	278	29	32	23	15	28
832	934	819	704	444	452	328	675	513	532	1246	1321	2049	2017	1369	725	238	421	1212	2857	2853	2611	2529	1914	1102	773	472	599	897	960	132	15	29	44	52	150
529	672	662	684	587	495	426	413	304	295	310	664	1126	1863	1623	870	365	220	267	1206	1850	1743	1351	1048	526	391	227	159	241	319	32	20	25	37	62	367
349	373	432	233	303	319	505	303	292	308	306	509	794	1280	1409	1252	661	520	374	522	927	1274	1334	836	653	490	437	372	298	136	57	100	74	68	83	320
96	68	98	97	66	101	195	161	167	183	141	226	233	449	692	609	559	512	455	519	710	729	685	620	667	615	537	462	297	69	66	68	76	86	60	41
													0	68	208	232	239	183	136	137	169	146	181	186	165	156	91	2							
40	35	30	39	30	26	19	33	21	13	17	20	37	38	26	27	37	31	15	10	11	9	22	19	10	15	15	15	12	26	33	35	14	19	42	42
173	180	208	232	227	232	215	243	228	168	155	181	156	126	124	125	139	137	114	101	105	77	57	60	48	48	85	137	121	109	88	65	55	82	130	152
23	26	30	36	37	37	40	39	31	19	15	18	17	16	19	23	22	21	17	9	10	9	9	6	7	8	9	8	6	4	3	3	5	8	15	17

Figure 21. SATOB 101 - 400 hPa vector mean wind. JANUARY 2006
All observations
Arrows are plotted where greater than 10 obs are present

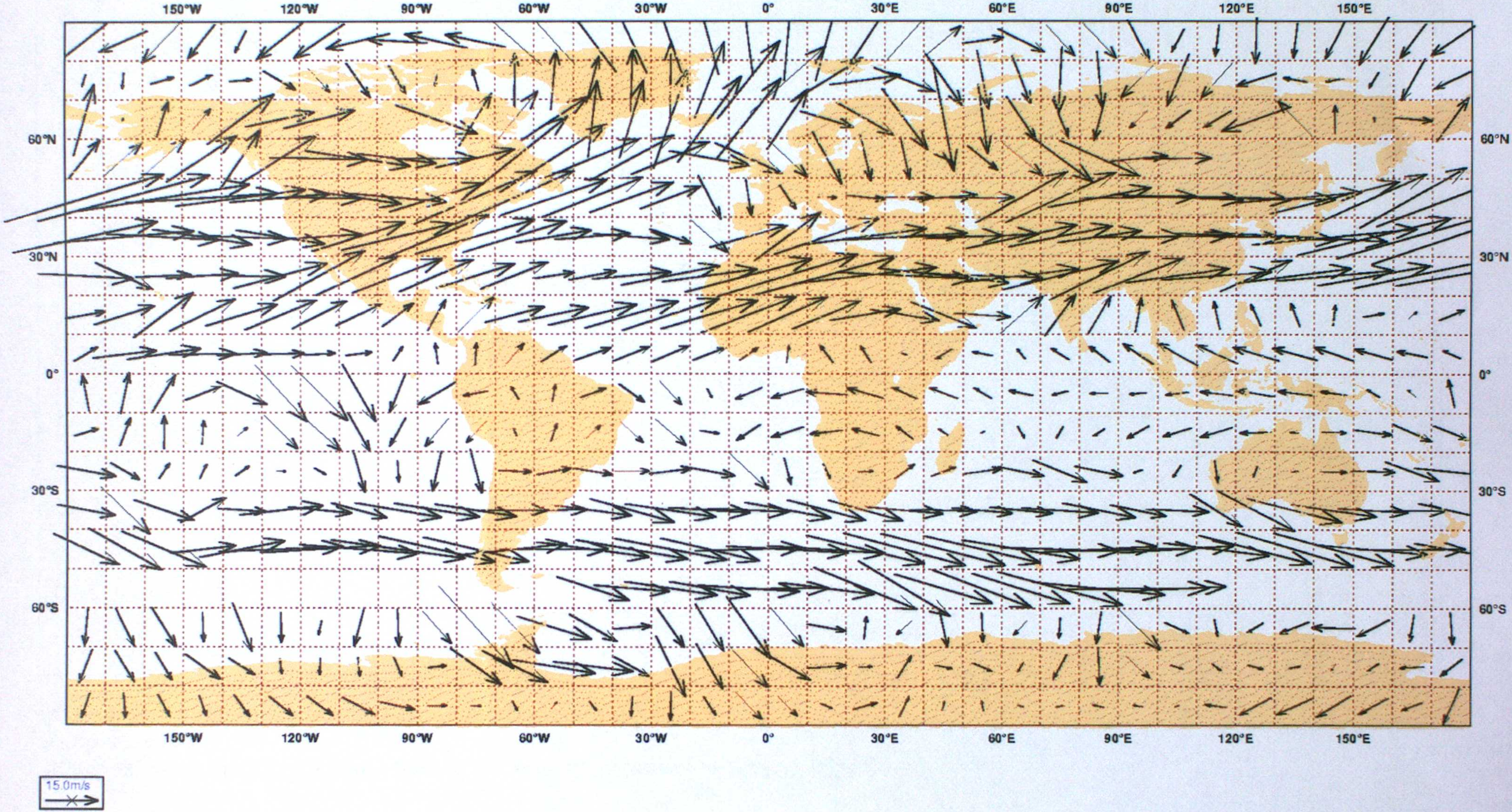

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
15.0m/s

Figure 22. SATOB 101 - 400 hPa mean vector wind differences. JANUARY 2006
All observations
Arrows are plotted where greater than 10 obs are present

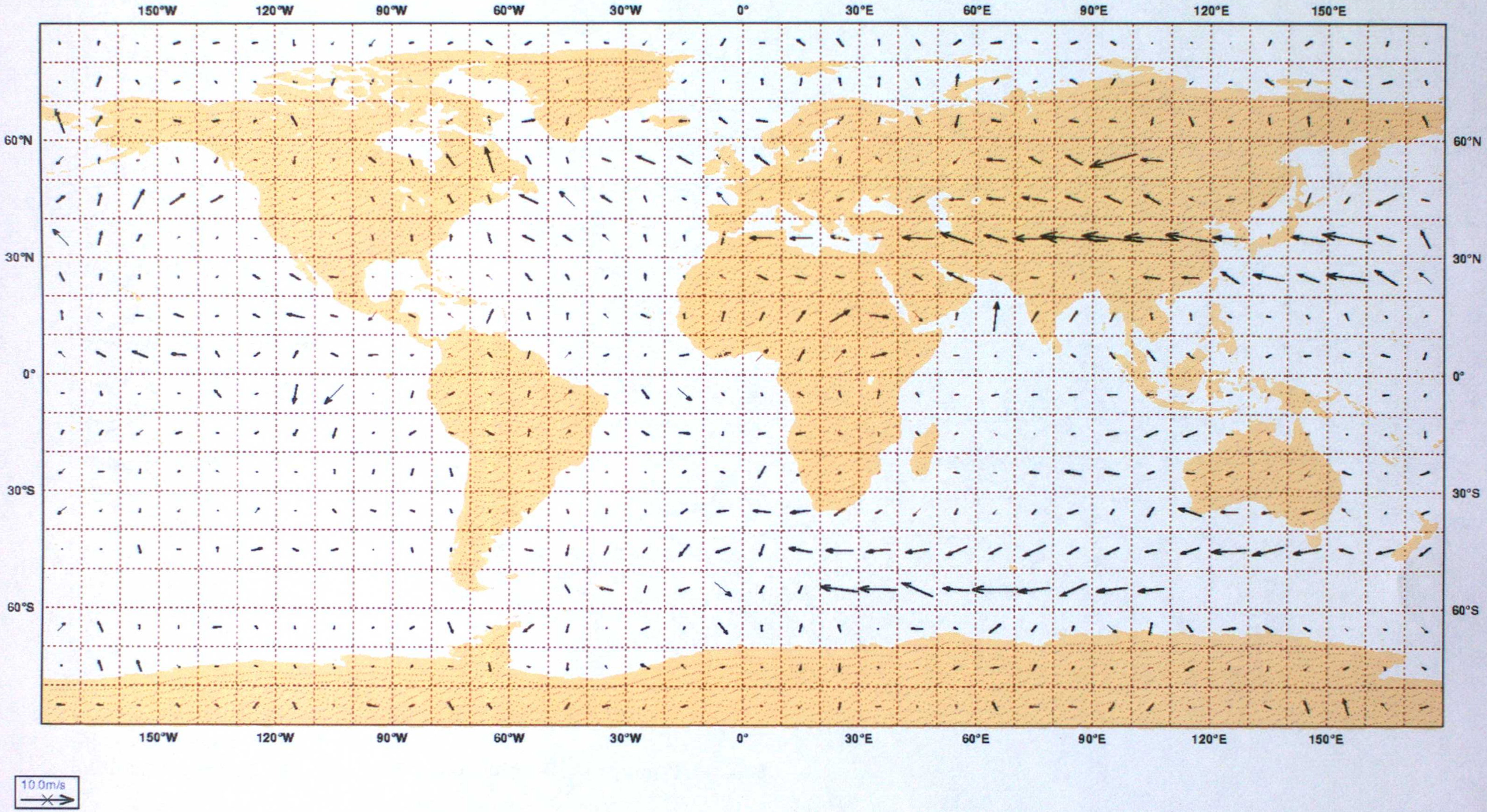
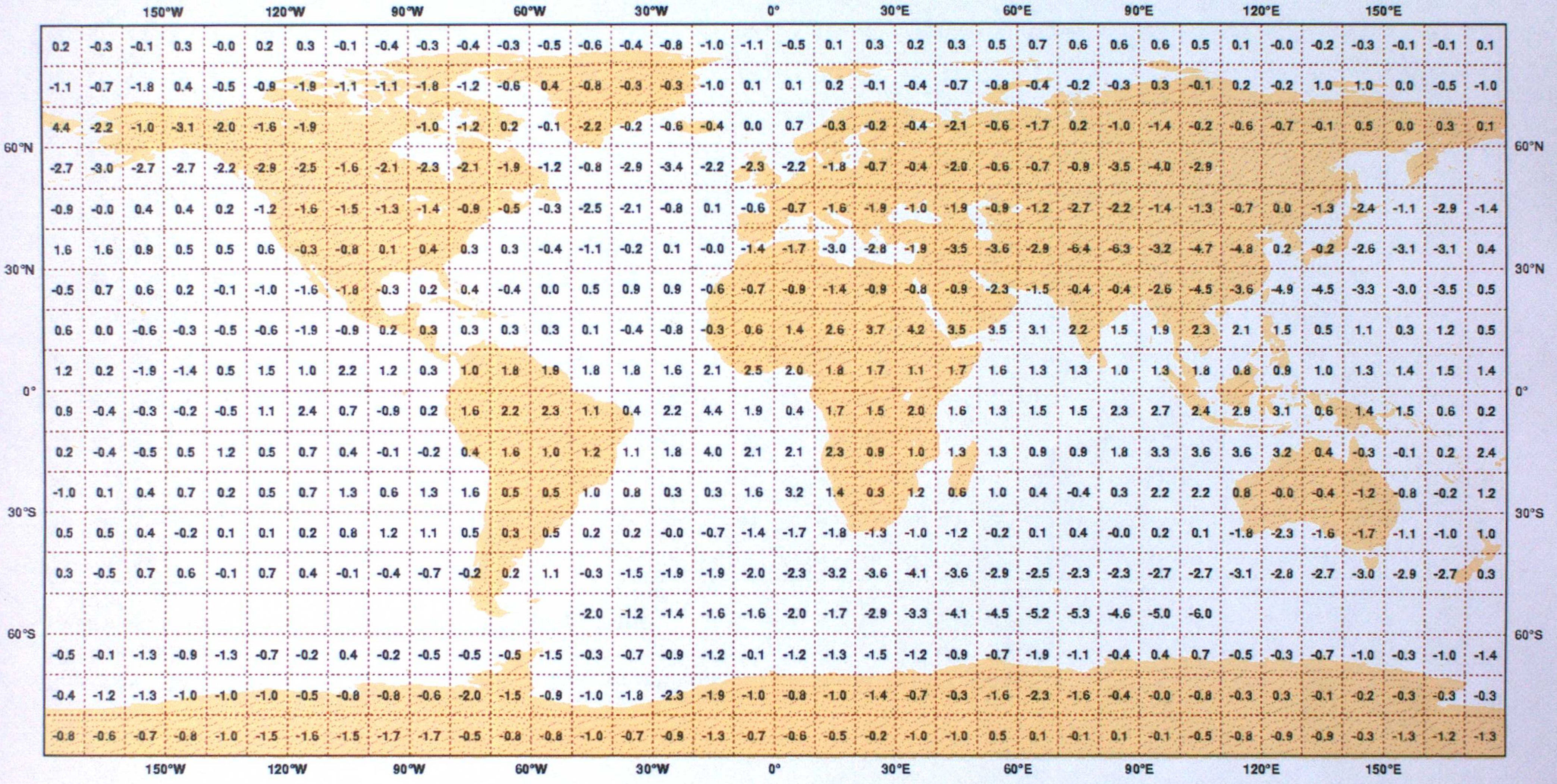
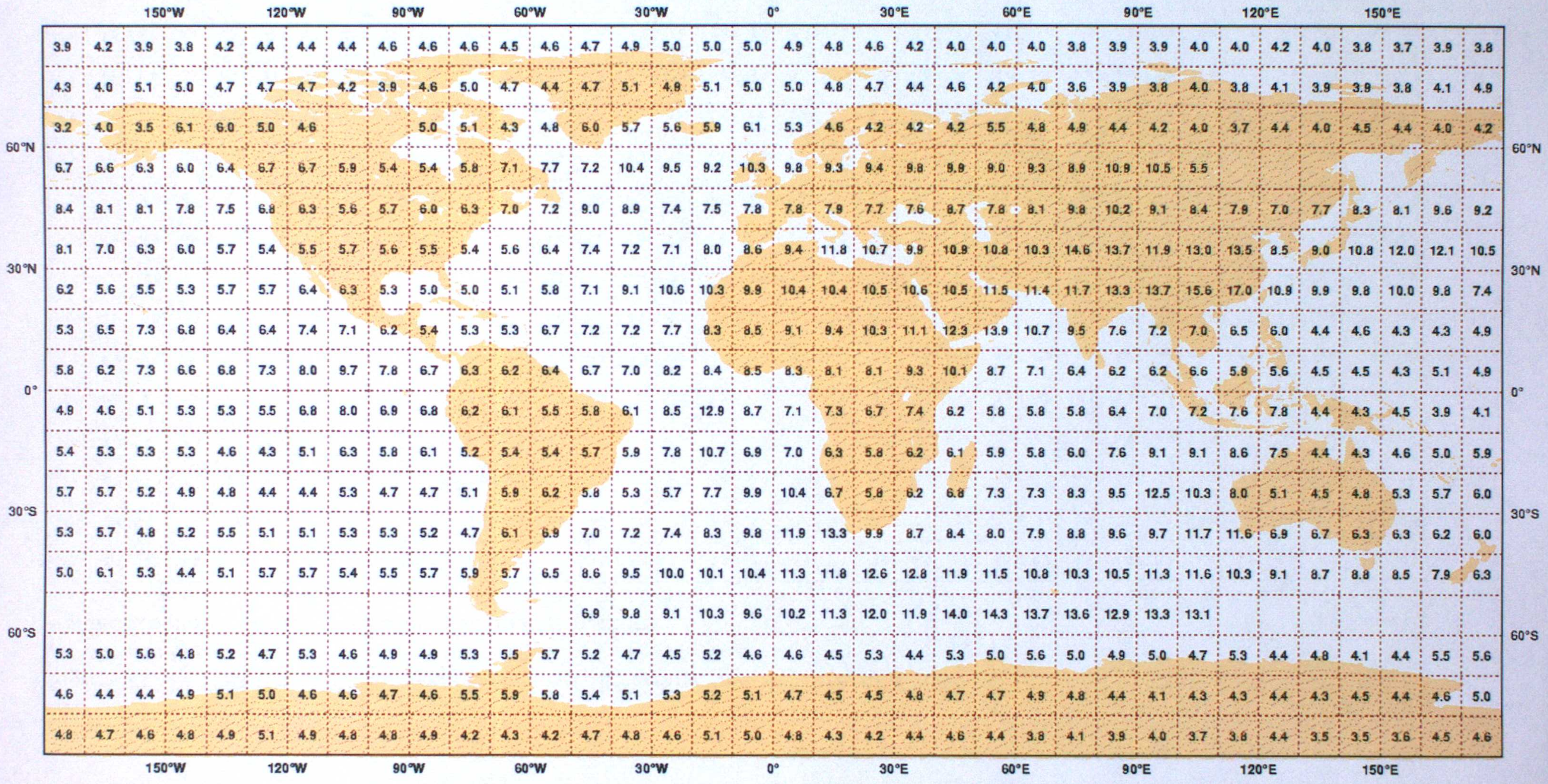

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
10.0m/s

Figure 23. SATOB 101 - 400 hPa mean O-B speed differences (ms-1). JANUARY 2006
All observations
Values are plotted where greater than 10 obs are present



0.2	-0.3	-0.1	0.3	-0.0	0.2	0.3	-0.1	-0.4	-0.3	-0.4	-0.3	-0.5	-0.6	-0.4	-0.8	-1.0	-1.1	-0.5	0.1	0.3	0.2	0.3	0.5	0.7	0.6	0.6	0.6	0.5	0.1	-0.0	-0.2	-0.3	-0.1	-0.1	0.1
-1.1	-0.7	-1.8	0.4	-0.5	-0.9	-1.9	-1.1	-1.1	-1.8	-1.2	-0.6	0.4	-0.8	-0.3	-0.3	-1.0	0.1	0.1	0.2	-0.1	-0.4	-0.7	-0.8	-0.4	-0.2	-0.3	0.3	-0.1	0.2	-0.2	1.0	1.0	0.0	-0.5	-1.0
4.4	-2.2	-1.0	-3.1	-2.0	-1.6	-1.9			-1.0	-1.2	0.2	-0.1	-2.2	-0.2	-0.6	-0.4	0.0	0.7	-0.3	-0.2	-0.4	-2.1	-0.6	-1.7	0.2	-1.0	-1.4	-0.2	-0.6	-0.7	-0.1	0.5	0.0	0.3	0.1
-2.7	-3.0	-2.7	-2.7	-2.2	-2.9	-2.5	-1.6	-2.1	-2.3	-2.1	-1.9	-1.2	-0.8	-2.9	-3.4	-2.2	-2.3	-2.2	-1.8	-0.7	-0.4	-2.0	-0.6	-0.7	-0.9	-3.5	-4.0	-2.9							
-0.9	-0.0	0.4	0.4	0.2	-1.2	-1.6	-1.5	-1.3	-1.4	-0.9	-0.5	-0.3	-2.5	-2.1	-0.8	0.1	-0.6	-0.7	-1.6	-1.9	-1.0	-1.9	-0.9	-1.2	-2.7	-2.2	-1.4	-1.3	-0.7	0.0	-1.3	-2.4	-1.1	-2.9	-1.4
1.6	1.6	0.9	0.5	0.5	0.6	-0.3	-0.8	0.1	0.4	0.3	0.3	-0.4	-1.1	-0.2	0.1	-0.0	-1.4	-1.7	-3.0	-2.8	-1.9	-3.5	-3.6	-2.9	-6.4	-6.3	-3.2	-4.7	-4.8	0.2	-0.2	-2.6	-3.1	-3.1	0.4
-0.5	0.7	0.6	0.2	-0.1	-1.0	-1.6	-1.8	-0.3	0.2	0.4	-0.4	0.0	0.5	0.9	0.9	-0.6	-0.7	-0.9	-1.4	-0.9	-0.8	-0.9	-2.3	-1.5	-0.4	-0.4	-2.6	-4.5	-3.6	-4.9	-4.5	-3.3	-3.0	-3.5	0.5
0.6	0.0	-0.6	-0.3	-0.5	-0.6	-1.9	-0.9	0.2	0.3	0.3	0.3	0.3	0.1	-0.4	-0.8	-0.3	0.6	1.4	2.6	3.7	4.2	3.5	3.5	3.1	2.2	1.5	1.9	2.3	2.1	1.5	0.5	1.1	0.3	1.2	0.5
1.2	0.2	-1.9	-1.4	0.5	1.5	1.0	2.2	1.2	0.3	1.0	1.8	1.9	1.8	1.8	1.6	2.1	2.5	2.0	1.8	1.7	1.1	1.7	1.6	1.3	1.3	1.0	1.3	1.8	0.8	0.9	1.0	1.3	1.4	1.5	1.4
0.9	-0.4	-0.3	-0.2	-0.5	1.1	2.4	0.7	-0.9	0.2	1.6	2.2	2.3	1.1	0.4	2.2	4.4	1.9	0.4	1.7	1.5	2.0	1.6	1.3	1.5	1.5	2.3	2.7	2.4	2.9	3.1	0.6	1.4	1.5	0.6	0.2
0.2	-0.4	-0.5	0.5	1.2	0.5	0.7	0.4	-0.1	-0.2	0.4	1.6	1.0	1.2	1.1	1.8	4.0	2.1	2.1	2.3	0.9	1.0	1.3	1.3	0.9	0.9	1.8	3.3	3.6	3.6	3.2	0.4	-0.3	-0.1	0.2	2.4
-1.0	0.1	0.4	0.7	0.2	0.5	0.7	1.3	0.6	1.3	1.6	0.5	0.5	1.0	0.8	0.3	0.3	1.6	3.2	1.4	0.3	1.2	0.6	1.0	0.4	-0.4	0.3	2.2	2.2	0.8	-0.0	-0.4	-1.2	-0.8	-0.2	1.2
0.5	0.5	0.4	-0.2	0.1	0.1	0.2	0.8	1.2	1.1	0.5	0.3	0.5	0.2	0.2	-0.0	-0.7	-1.4	-1.7	-1.8	-1.3	-1.0	-1.2	-0.2	0.1	0.4	-0.0	0.2	0.1	-1.8	-2.3	-1.6	-1.7	-1.1	-1.0	1.0
0.3	-0.5	0.7	0.6	-0.1	0.7	0.4	-0.1	-0.4	-0.7	-0.2	0.2	1.1	-0.3	-1.5	-1.9	-1.9	-2.0	-2.3	-3.2	-3.6	-4.1	-3.6	-2.9	-2.5	-2.3	-2.3	-2.7	-2.7	-3.1	-2.8	-2.7	-3.0	-2.9	-2.7	0.3
													-2.0	-1.2	-1.4	-1.6	-1.6	-2.0	-1.7	-2.9	-3.3	-4.1	-4.5	-5.2	-5.3	-4.6	-5.0	-6.0							
-0.5	-0.1	-1.3	-0.9	-1.3	-0.7	-0.2	0.4	-0.2	-0.5	-0.5	-0.5	-1.5	-0.3	-0.7	-0.9	-1.2	-0.1	-1.2	-1.3	-1.5	-1.2	-0.9	-0.7	-1.9	-1.1	-0.4	0.4	0.7	-0.5	-0.3	-0.7	-1.0	-0.3	-1.0	-1.4
-0.4	-1.2	-1.3	-1.0	-1.0	-1.0	-0.5	-0.8	-0.8	-0.6	-2.0	-1.5	-0.9	-1.0	-1.8	-2.3	-1.9	-1.0	-0.8	-1.0	-1.4	-0.7	-0.3	-1.6	-2.3	-1.6	-0.4	-0.0	-0.8	-0.3	0.3	-0.1	-0.2	-0.3	-0.3	-0.3
-0.8	-0.6	-0.7	-0.8	-1.0	-1.5	-1.6	-1.5	-1.7	-1.7	-0.5	-0.8	-0.8	-1.0	-0.7	-0.9	-1.3	-0.7	-0.6	-0.5	-0.2	-1.0	-1.0	0.5	0.1	-0.1	0.1	-0.1	-0.5	-0.8	-0.9	-0.9	-0.3	-1.3	-1.2	-1.3

Figure 24. SATOB 101 - 400 hPa mean RMS O-B vector differences (ms-1). JANUARY 2006
All observations
Values are plotted where greater than 10 obs are present



3.9	4.2	3.9	3.8	4.2	4.4	4.4	4.4	4.6	4.6	4.6	4.5	4.6	4.7	4.9	5.0	5.0	5.0	4.9	4.8	4.6	4.2	4.0	4.0	4.0	3.8	3.9	3.9	4.0	4.0	4.2	4.0	3.8	3.7	3.9	3.8
4.3	4.0	5.1	5.0	4.7	4.7	4.7	4.2	3.9	4.6	5.0	4.7	4.4	4.7	5.1	4.9	5.1	5.0	5.0	4.8	4.7	4.4	4.6	4.2	4.0	3.6	3.9	3.8	4.0	3.8	4.1	3.9	3.9	3.8	4.1	4.9
3.2	4.0	3.5	6.1	6.0	5.0	4.6			5.0	5.1	4.3	4.8	6.0	5.7	5.6	5.9	6.1	5.3	4.6	4.2	4.2	4.2	5.5	4.8	4.9	4.4	4.2	4.0	3.7	4.4	4.0	4.5	4.4	4.0	4.2
6.7	6.6	6.3	6.0	6.4	6.7	6.7	5.9	5.4	5.4	5.8	7.1	7.7	7.2	10.4	9.5	9.2	10.3	9.8	9.3	9.4	9.8	9.9	9.0	9.3	8.9	10.9	10.5	5.5							
8.4	8.1	8.1	7.8	7.5	6.8	6.3	5.6	5.7	6.0	6.3	7.0	7.2	9.0	8.9	7.4	7.5	7.8	7.8	7.9	7.7	7.6	8.7	7.8	8.1	9.8	10.2	9.1	8.4	7.9	7.0	7.7	8.3	8.1	9.6	9.2
8.1	7.0	6.3	6.0	5.7	5.4	5.5	5.7	5.6	5.5	5.4	5.6	6.4	7.4	7.2	7.1	8.0	8.6	9.4	11.8	10.7	9.9	10.9	10.8	10.3	14.6	13.7	11.9	13.0	13.5	8.5	9.0	10.8	12.0	12.1	10.5
6.2	5.6	5.5	5.3	5.7	5.7	6.4	6.3	5.3	5.0	5.0	5.1	5.8	7.1	9.1	10.6	10.3	9.9	10.4	10.4	10.5	10.6	10.5	11.5	11.4	11.7	13.3	13.7	15.6	17.0	10.9	9.9	9.8	10.0	9.8	7.4
5.3	6.5	7.3	6.8	6.4	6.4	7.4	7.1	6.2	5.4	5.3	5.3	6.7	7.2	7.2	7.7	8.3	8.5	9.1	9.4	10.3	11.1	12.3	13.9	10.7	9.5	7.6	7.2	7.0	6.5	6.0	4.4	4.6	4.3	4.3	4.9
5.8	6.2	7.3	6.6	6.8	7.3	8.0	9.7	7.8	6.7	6.3	6.2	6.4	6.7	7.0	8.2	8.4	8.5	8.3	8.1	8.1	9.3	10.1	8.7	7.1	6.4	6.2	6.2	6.6	5.9	5.6	4.5	4.5	4.3	5.1	4.9
4.9	4.6	5.1	5.3	5.3	5.5	6.8	8.0	6.9	6.8	6.2	6.1	5.5	5.8	6.1	8.5	12.9	8.7	7.1	7.3	6.7	7.4	6.2	5.8	5.8	5.8	6.4	7.0	7.2	7.6	7.8	4.4	4.3	4.5	3.9	4.1
5.4	5.3	5.3	5.3	4.6	4.3	5.1	6.3	5.8	6.1	5.2	5.4	5.4	5.7	5.9	7.8	10.7	6.9	7.0	6.3	5.8	6.2	6.1	5.9	5.8	6.0	7.6	9.1	9.1	8.6	7.5	4.4	4.3	4.6	5.0	5.9
5.7	5.7	5.2	4.9	4.8	4.4	4.4	5.3	4.7	4.7	5.1	5.9	6.2	5.8	5.3	5.7	7.7	9.9	10.4	6.7	5.8	6.2	6.8	7.3	7.3	8.3	9.5	12.5	10.3	8.0	5.1	4.5	4.8	5.3	5.7	6.0
5.3	5.7	4.8	5.2	5.5	5.1	5.1	5.3	5.3	5.2	4.7	6.1	6.9	7.0	7.2	7.4	8.3	9.8	11.9	13.3	9.9	8.7	8.4	8.0	7.9	8.8	9.6	9.7	11.7	11.6	6.9	6.7	6.3	6.3	6.2	6.0
5.0	6.1	5.3	4.4	5.1	5.7	5.7	5.4	5.5	5.7	5.9	5.7	6.5	8.6	9.5	10.0	10.1	10.4	11.3	11.8	12.6	12.8	11.9	11.5	10.8	10.3	10.5	11.3	11.6	10.3	9.1	8.7	8.8	8.5	7.9	6.3
													6.9	9.8	9.1	10.3	9.6	10.2	11.3	12.0	11.9	14.0	14.3	13.7	13.6	12.9	13.3	13.1							
5.3	5.0	5.6	4.8	5.2	4.7	5.3	4.6	4.9	4.9	5.3	5.5	5.7	5.2	4.7	4.5	5.2	4.6	4.6	4.5	5.3	4.4	5.3	5.0	5.6	5.0	4.9	5.0	4.7	5.3	4.4	4.8	4.1	4.4	5.5	5.6
4.6	4.4	4.4	4.9	5.1	5.0	4.6	4.6	4.7	4.6	5.5	5.9	5.8	5.4	5.1	5.3	5.2	5.1	4.7	4.5	4.5	4.8	4.7	4.7	4.9	4.8	4.4	4.1	4.3	4.3	4.4	4.3	4.5	4.4	4.6	5.0
4.8	4.7	4.6	4.8	4.9	5.1	4.9	4.8	4.8	4.9	4.2	4.3	4.2	4.7	4.8	4.6	5.1	5.0	4.8	4.3	4.2	4.4	4.6	4.4	3.8	4.1	3.9	4.0	3.7	3.8	4.4	3.5	3.5	3.6	4.5	4.6

MONITORING OF SATELLITE TEMPERATURES

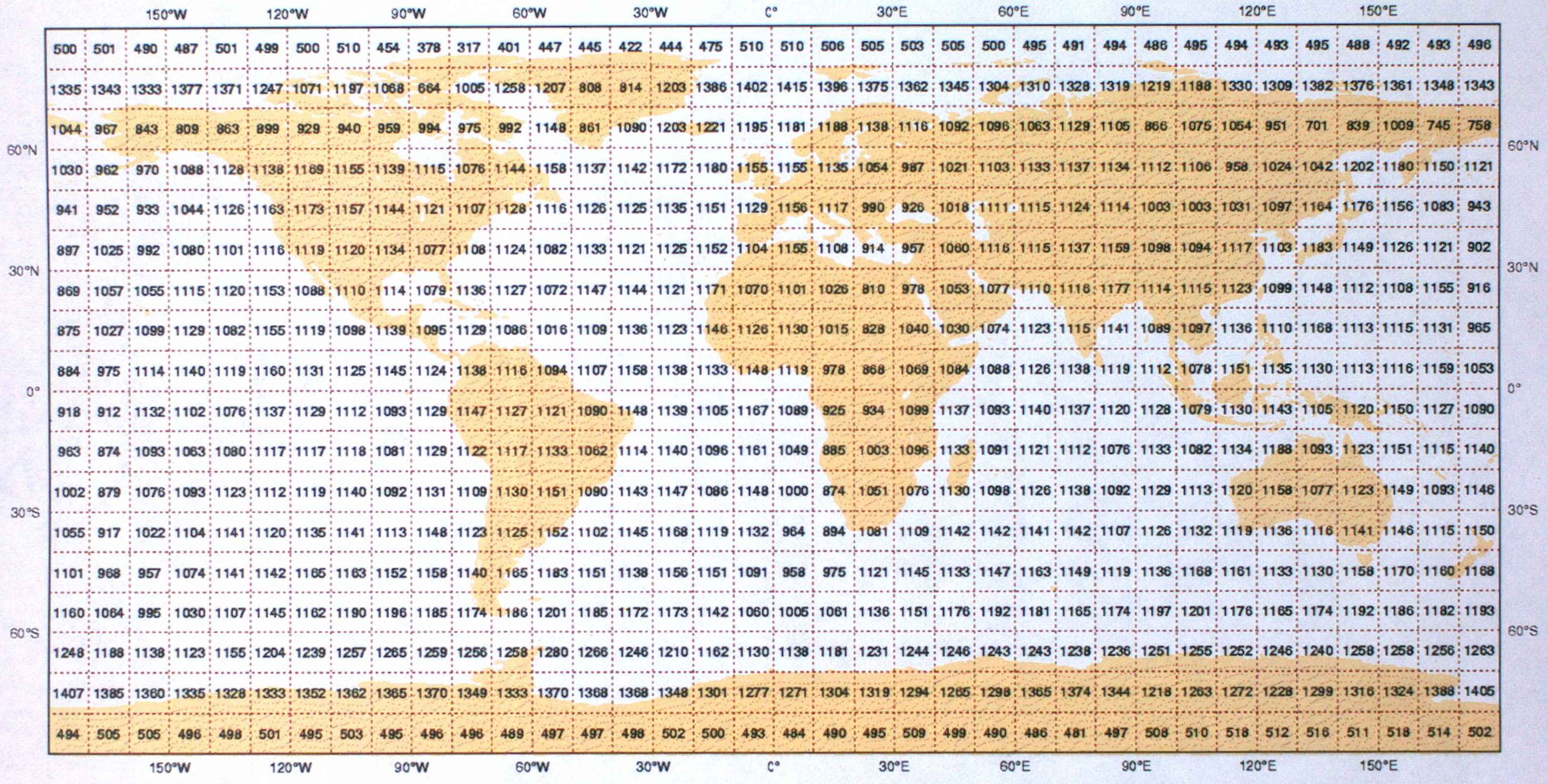
MONITORING CENTRE: EXETER

MONTH: Jan 06

Monitoring procedures

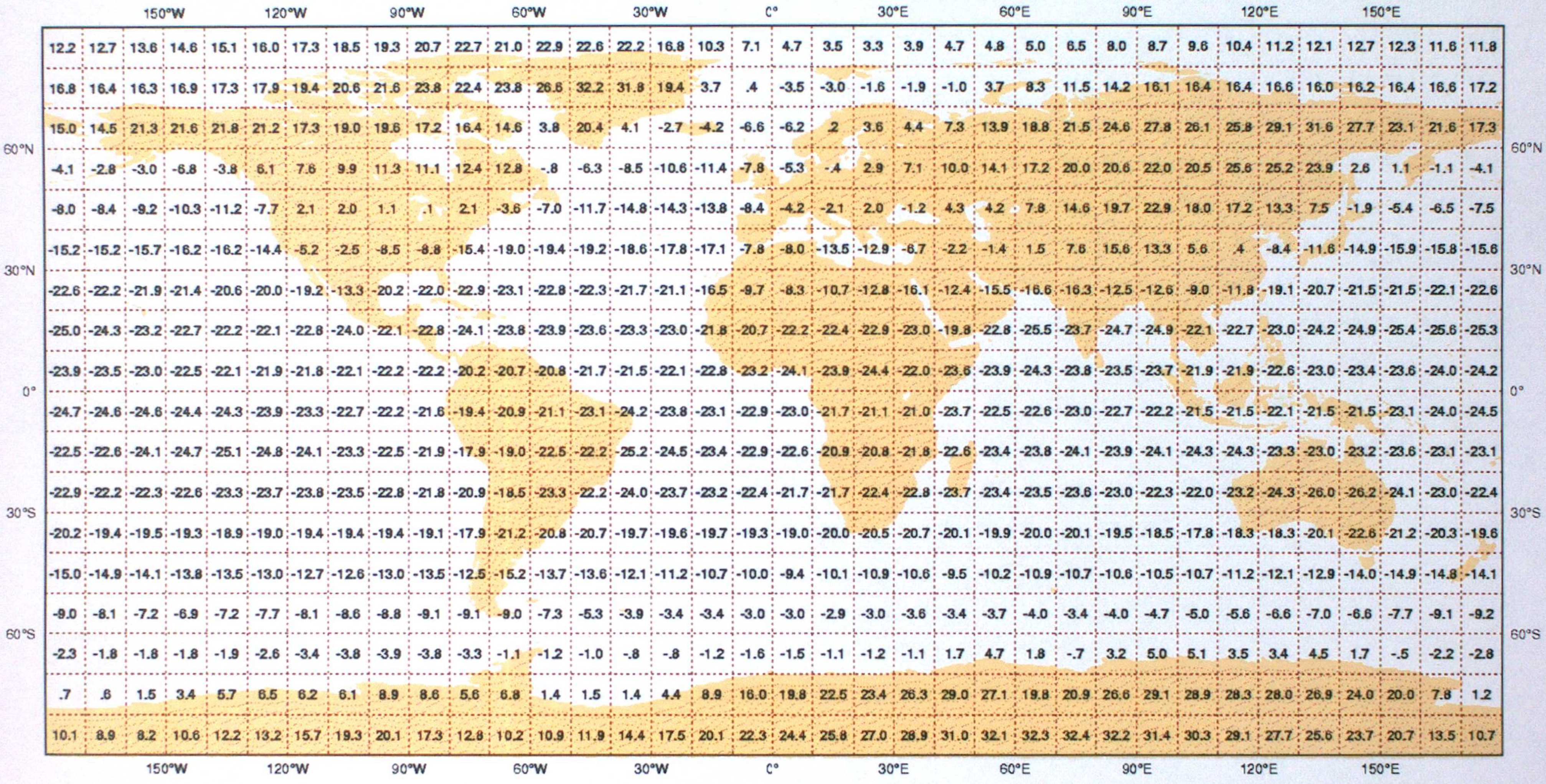
Period	:One calendar month.
Data monitored	:Reports from NOAA-15, NOAA-16 and NOAA-17.
Standard of comparison	:Background field from UKMO global model.
Selection Criteria	:All soundings.
Data Extracted	:Sounding channels (and approximate weighting function peaks, hPa) HIRS8 (Surface) HIRS15 (700) HIRS11 (500-700) HIRS4 (400) AMSUA5 (700) AMSUA7 (300) AMSUA9 (100)
	:Mean and standard deviation observation-minus-background brightness temperature differences

Figure 25. ATOVS mean daily count. JANUARY 2006
NOAA15, using all observations
Global average number of observations in 24 hours = 684382



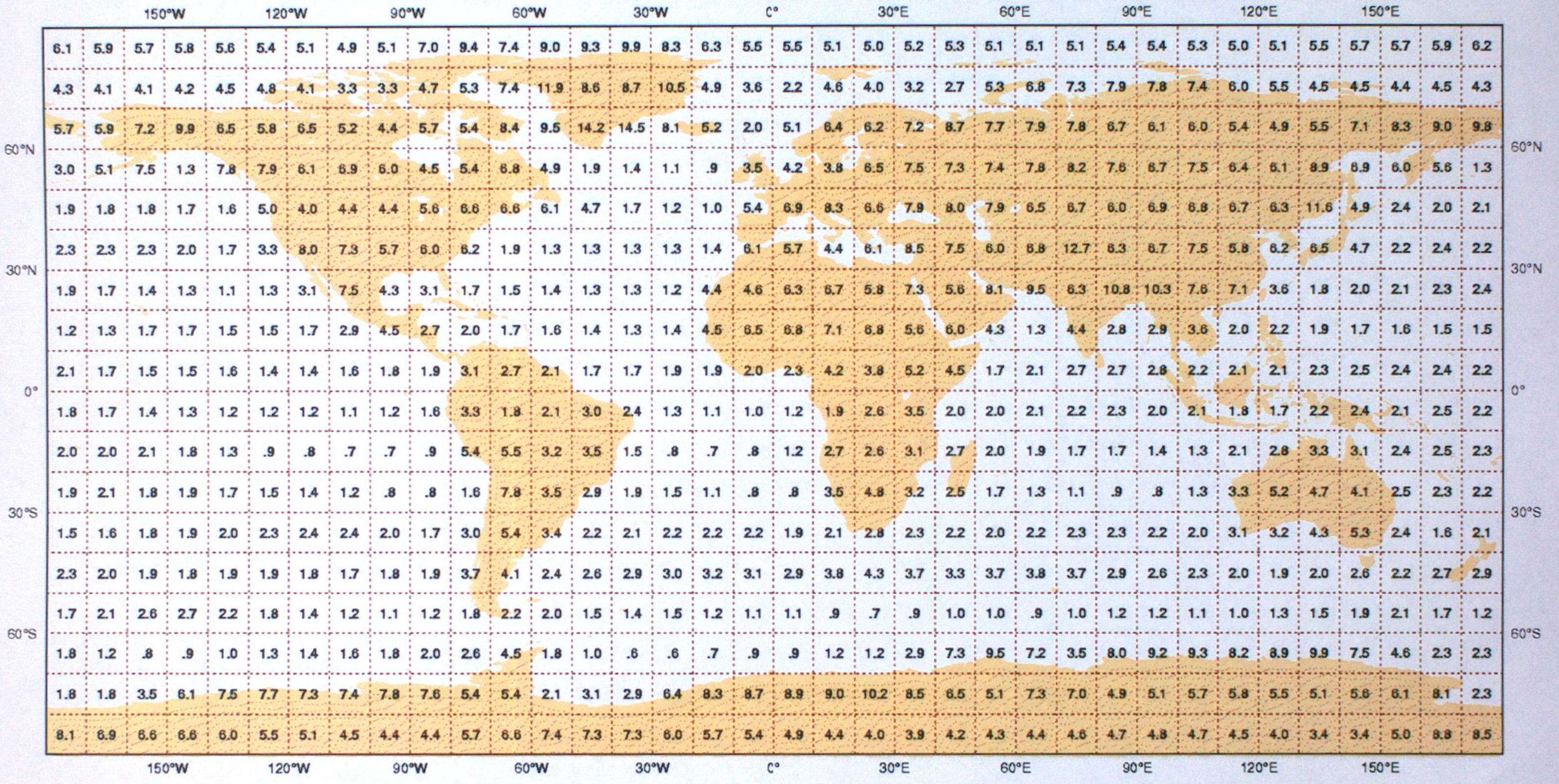
500	501	490	487	501	499	500	510	454	378	317	401	447	445	422	444	475	510	510	506	505	503	505	500	495	491	494	486	495	494	493	495	488	492	493	496
1335	1343	1333	1377	1371	1247	1071	1197	1068	664	1005	1258	1207	808	814	1203	1386	1402	1415	1396	1375	1362	1345	1304	1310	1328	1319	1219	1188	1330	1309	1382	1376	1361	1348	1343
1044	967	843	809	863	899	929	940	959	994	975	992	1148	861	1090	1203	1221	1195	1181	1188	1138	1116	1092	1096	1063	1129	1105	866	1075	1054	951	701	839	1009	745	758
1030	962	970	1088	1128	1138	1169	1155	1139	1115	1076	1144	1158	1137	1142	1172	1180	1155	1155	1135	1054	987	1021	1103	1133	1137	1134	1112	1106	958	1024	1042	1202	1180	1150	1121
941	952	933	1044	1126	1163	1173	1157	1144	1121	1107	1128	1116	1126	1125	1135	1151	1129	1156	1117	990	926	1018	1111	1115	1124	1114	1003	1003	1031	1097	1164	1176	1156	1083	943
897	1025	992	1080	1101	1116	1119	1120	1134	1077	1108	1124	1082	1133	1121	1125	1152	1104	1155	1108	914	957	1060	1116	1115	1137	1159	1098	1094	1117	1103	1183	1149	1126	1121	902
869	1057	1055	1115	1120	1153	1088	1110	1114	1079	1136	1127	1072	1147	1144	1121	1171	1070	1101	1026	810	978	1053	1077	1110	1116	1177	1114	1115	1123	1099	1148	1112	1108	1155	916
875	1027	1099	1129	1082	1155	1119	1098	1139	1095	1129	1086	1016	1109	1136	1123	1146	1126	1130	1015	828	1040	1030	1074	1123	1115	1141	1089	1097	1136	1110	1168	1113	1115	1131	965
884	975	1114	1140	1119	1160	1131	1125	1145	1124	1138	1116	1094	1107	1158	1138	1133	1148	1119	978	868	1069	1084	1088	1126	1138	1119	1112	1078	1151	1135	1130	1113	1116	1159	1053
918	912	1132	1102	1076	1137	1129	1112	1093	1129	1147	1127	1121	1090	1148	1139	1105	1167	1089	925	934	1099	1137	1093	1140	1137	1120	1128	1079	1130	1143	1105	1120	1150	1127	1090
963	874	1093	1063	1080	1117	1117	1118	1081	1129	1122	1117	1133	1062	1114	1140	1096	1161	1049	885	1003	1096	1133	1091	1121	1112	1076	1133	1082	1134	1188	1093	1123	1151	1115	1140
1002	879	1076	1093	1123	1112	1119	1140	1092	1131	1109	1130	1151	1090	1143	1147	1086	1148	1000	874	1051	1076	1130	1098	1126	1138	1092	1129	1113	1120	1158	1077	1123	1149	1093	1146
1055	917	1022	1104	1141	1120	1135	1141	1113	1148	1123	1125	1152	1102	1145	1168	1119	1132	964	894	1081	1109	1142	1142	1141	1142	1107	1126	1132	1119	1136	1116	1141	1146	1115	1150
1101	968	957	1074	1141	1142	1165	1163	1152	1158	1140	1165	1183	1151	1138	1156	1151	1091	958	975	1121	1145	1133	1147	1163	1149	1119	1136	1168	1161	1133	1130	1158	1170	1160	1168
1160	1064	995	1030	1107	1145	1162	1190	1196	1185	1174	1186	1201	1185	1172	1173	1142	1060	1005	1061	1136	1151	1176	1192	1181	1165	1174	1197	1201	1176	1165	1174	1192	1186	1182	1193
1248	1188	1138	1123	1155	1204	1239	1257	1265	1259	1256	1258	1280	1266	1246	1210	1162	1130	1138	1181	1231	1244	1246	1243	1243	1238	1236	1251	1255	1252	1246	1240	1258	1258	1256	1263
1407	1385	1360	1335	1328	1333	1352	1362	1365	1370	1349	1333	1370	1368	1368	1348	1301	1277	1271	1304	1319	1294	1265	1298	1365	1374	1344	1218	1263	1272	1228	1299	1316	1324	1388	1405
494	505	505	496	498	501	495	503	495	496	496	489	497	497	498	502	500	493	484	490	495	509	499	490	486	481	497	508	510	518	512	516	511	518	514	502

Figure 26. ATOVS MEAN O-B brightness temperature differences (deg C). JANUARY 2006
Channel: HIRS8 (Surface)
NOAA15, using all observations



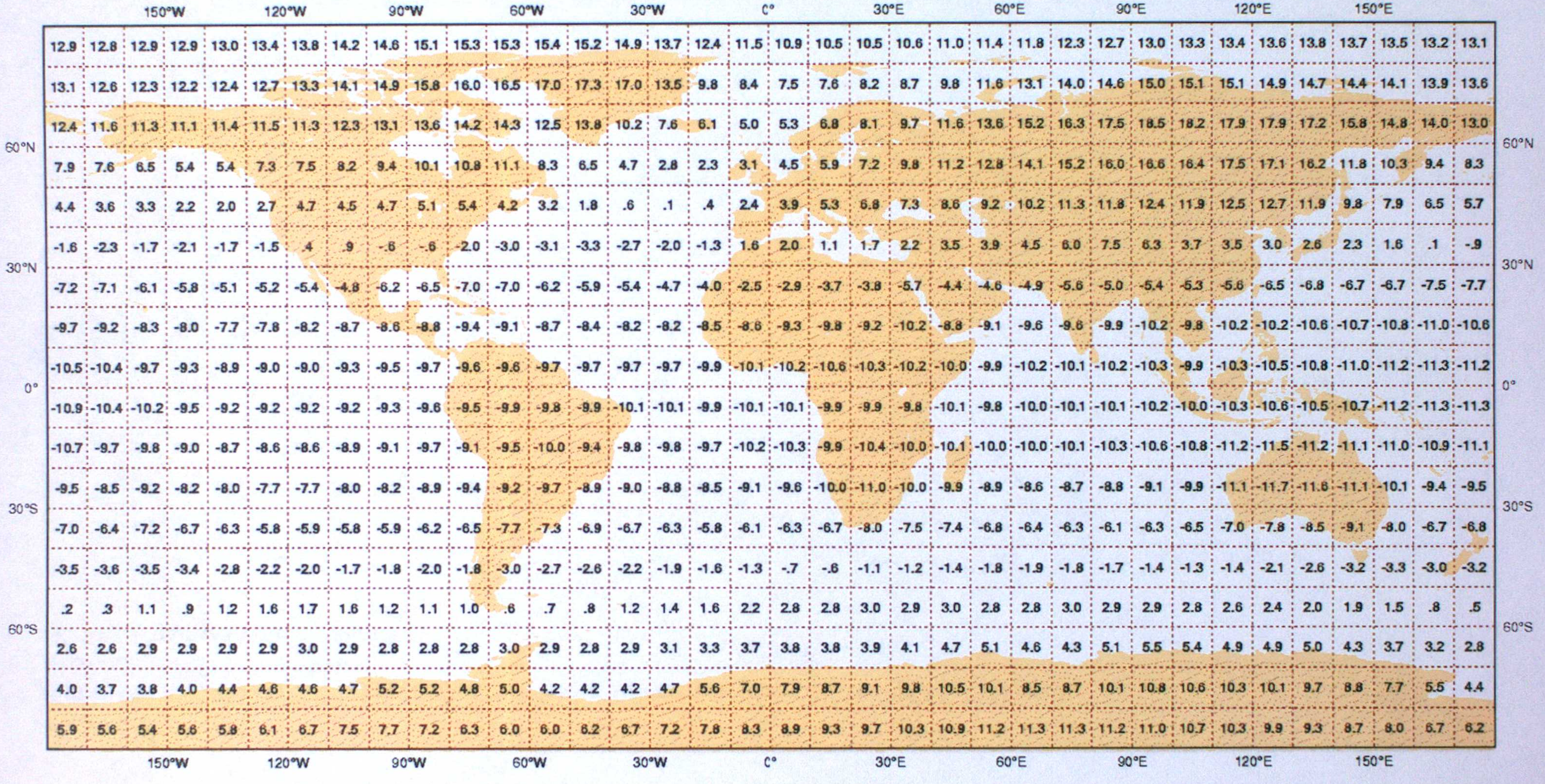
12.2	12.7	13.6	14.6	15.1	16.0	17.3	18.5	19.3	20.7	22.7	21.0	22.9	22.6	22.2	16.8	10.3	7.1	4.7	3.5	3.3	3.9	4.7	4.8	5.0	6.5	8.0	8.7	9.6	10.4	11.2	12.1	12.7	12.3	11.6	11.8
16.8	16.4	16.3	16.9	17.3	17.9	19.4	20.6	21.6	23.8	22.4	23.8	26.6	32.2	31.8	19.4	3.7	.4	-3.5	-3.0	-1.6	-1.9	-1.0	3.7	8.3	11.5	14.2	16.1	16.4	16.4	16.6	16.0	16.2	16.4	16.6	17.2
15.0	14.5	21.3	21.6	21.8	21.2	17.3	19.0	19.6	17.2	16.4	14.6	3.8	20.4	4.1	-2.7	-4.2	-6.6	-6.2	.2	3.6	4.4	7.3	13.9	18.8	21.5	24.6	27.8	26.1	25.8	29.1	31.6	27.7	23.1	21.6	17.3
-4.1	-2.8	-3.0	-6.8	-3.8	6.1	7.6	9.9	11.3	11.1	12.4	12.8	-.8	-6.3	-8.5	-10.6	-11.4	-7.8	-5.3	-.4	2.9	7.1	10.0	14.1	17.2	20.0	20.6	22.0	20.5	25.6	25.2	23.9	2.6	1.1	-1.1	-4.1
-8.0	-8.4	-9.2	-10.3	-11.2	-7.7	2.1	2.0	1.1	.1	2.1	-3.6	-7.0	-11.7	-14.8	-14.3	-13.8	-8.4	-4.2	-2.1	2.0	-1.2	4.3	4.2	7.8	14.6	19.7	22.9	18.0	17.2	13.3	7.5	-1.9	-5.4	-6.5	-7.5
-15.2	-15.2	-15.7	-16.2	-16.2	-14.4	-5.2	-2.5	-8.5	-8.8	-15.4	-19.0	-19.4	-19.2	-18.6	-17.8	-17.1	-7.8	-8.0	-13.5	-12.9	-6.7	-2.2	-1.4	1.5	7.6	15.6	13.3	5.6	.4	-8.4	-11.6	-14.9	-15.9	-15.8	-15.6
-22.6	-22.2	-21.9	-21.4	-20.6	-20.0	-19.2	-13.3	-20.2	-22.0	-22.9	-23.1	-22.8	-22.3	-21.7	-21.1	-16.5	-9.7	-8.3	-10.7	-12.8	-16.1	-12.4	-15.5	-16.6	-16.3	-12.5	-12.6	-9.0	-11.8	-19.1	-20.7	-21.5	-21.5	-22.1	-22.6
-25.0	-24.3	-23.2	-22.7	-22.2	-22.1	-22.8	-24.0	-22.1	-22.8	-24.1	-23.8	-23.9	-23.6	-23.3	-23.0	-21.8	-20.7	-22.2	-22.4	-22.9	-23.0	-19.8	-22.8	-25.5	-23.7	-24.7	-24.9	-22.1	-22.7	-23.0	-24.2	-24.9	-25.4	-25.6	-25.3
-23.9	-23.5	-23.0	-22.5	-22.1	-21.9	-21.8	-22.1	-22.2	-22.2	-20.2	-20.7	-20.8	-21.7	-21.5	-22.1	-22.8	-23.2	-24.1	-23.9	-24.4	-22.0	-23.6	-23.9	-24.3	-23.8	-23.5	-23.7	-21.9	-21.9	-22.6	-23.0	-23.4	-23.6	-24.0	-24.2
-24.7	-24.6	-24.6	-24.4	-24.3	-23.9	-23.3	-22.7	-22.2	-21.6	-19.4	-20.9	-21.1	-23.1	-24.2	-23.8	-23.1	-22.9	-23.0	-21.7	-21.1	-21.0	-23.7	-22.5	-22.6	-23.0	-22.7	-22.2	-21.5	-21.5	-22.1	-21.5	-21.5	-23.1	-24.0	-24.5
-22.5	-22.6	-24.1	-24.7	-25.1	-24.8	-24.1	-23.3	-22.5	-21.9	-17.9	-19.0	-22.5	-22.2	-25.2	-24.5	-23.4	-22.9	-22.6	-20.9	-20.8	-21.8	-22.6	-23.4	-23.8	-24.1	-23.9	-24.1	-24.3	-24.3	-23.3	-23.0	-23.2	-23.6	-23.1	-23.1
-22.9	-22.2	-22.3	-22.6	-23.3	-23.7	-23.8	-23.5	-22.8	-21.8	-20.9	-18.5	-23.3	-22.2	-24.0	-23.7	-23.2	-22.4	-21.7	-21.7	-22.4	-22.8	-23.7	-23.4	-23.5	-23.6	-23.0	-22.3	-22.0	-23.2	-24.3	-26.0	-26.2	-24.1	-23.0	-22.4
-20.2	-19.4	-19.5	-19.3	-18.9	-19.0	-19.4	-19.4	-19.4	-19.1	-17.9	-21.2	-20.8	-20.7	-19.7	-19.6	-19.7	-19.3	-19.0	-20.0	-20.5	-20.7	-20.1	-19.9	-20.0	-20.1	-19.5	-18.5	-17.8	-18.3	-18.3	-20.1	-22.6	-21.2	-20.3	-19.6
-15.0	-14.9	-14.1	-13.8	-13.5	-13.0	-12.7	-12.6	-13.0	-13.5	-12.5	-15.2	-13.7	-13.6	-12.1	-11.2	-10.7	-10.0	-9.4	-10.1	-10.9	-10.6	-9.5	-10.2	-10.9	-10.7	-10.6	-10.5	-10.7	-11.2	-12.1	-12.9	-14.0	-14.9	-14.8	-14.1
-9.0	-8.1	-7.2	-6.9	-7.2	-7.7	-8.1	-8.6	-8.8	-9.1	-9.1	-9.0	-7.3	-5.3	-3.9	-3.4	-3.4	-3.0	-3.0	-2.9	-3.0	-3.6	-3.4	-3.7	-4.0	-3.4	-4.0	-4.7	-5.0	-5.6	-6.6	-7.0	-6.6	-7.7	-9.1	-9.2
-2.3	-1.8	-1.8	-1.8	-1.9	-2.6	-3.4	-3.8	-3.9	-3.8	-3.3	-1.1	-1.2	-1.0	-.8	-.8	-1.2	-1.6	-1.5	-1.1	-1.2	-1.1	1.7	4.7	1.8	-.7	3.2	5.0	5.1	3.5	3.4	4.5	1.7	-.5	-2.2	-2.8
.7	.6	1.5	3.4	5.7	6.5	6.2	6.1	8.9	8.6	5.6	6.8	1.4	1.5	1.4	4.4	8.9	16.0	19.8	22.5	23.4	26.3	29.0	27.1	19.8	20.9	26.6	29.1	28.9	28.3	28.0	26.9	24.0	20.0	7.8	1.2
10.1	8.9	8.2	10.6	12.2	13.2	15.7	19.3	20.1	17.3	12.8	10.2	10.9	11.9	14.4	17.5	20.1	22.3	24.4	25.8	27.0	28.9	31.0	32.1	32.3	32.4	32.2	31.4	30.3	29.1	27.7	25.6	23.7	20.7	13.5	10.7

Figure 27. ATOVS SD O-B brightness temperature differences (deg C). JANUARY 2006
Channel: HIRS8 (Surface)
NOAA15, using all observations



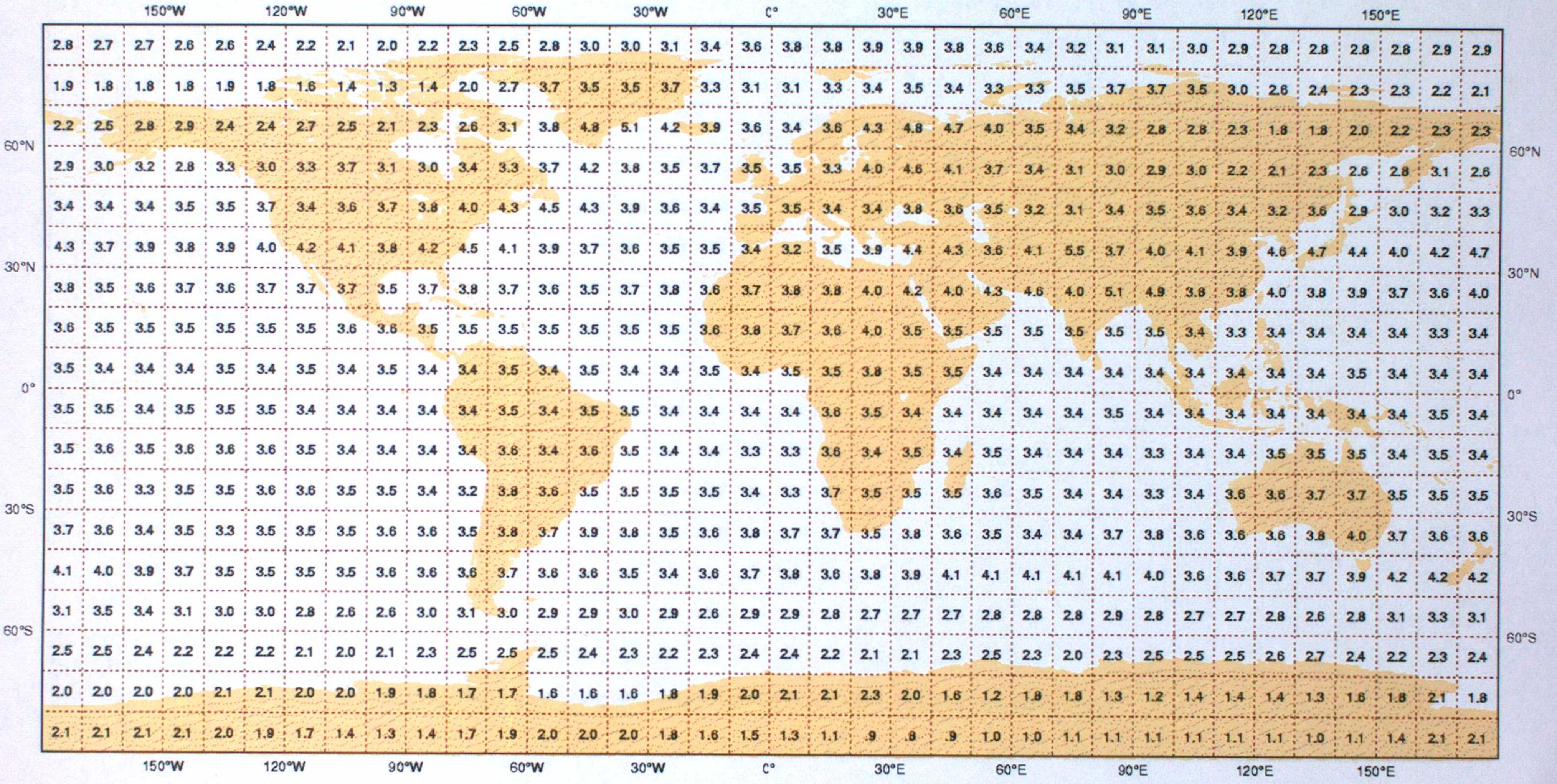
6.1	5.9	5.7	5.8	5.6	5.4	5.1	4.9	5.1	7.0	9.4	7.4	9.0	9.3	9.9	8.3	6.3	5.5	5.5	5.1	5.0	5.2	5.3	5.1	5.1	5.1	5.4	5.4	5.3	5.0	5.1	5.5	5.7	5.7	5.9	6.2
4.3	4.1	4.1	4.2	4.5	4.8	4.1	3.3	3.3	4.7	5.3	7.4	11.9	8.6	8.7	10.5	4.9	3.6	2.2	4.6	4.0	3.2	2.7	5.3	6.8	7.3	7.9	7.8	7.4	6.0	5.5	4.5	4.5	4.4	4.5	4.3
5.7	5.9	7.2	9.9	6.5	5.8	6.5	5.2	4.4	5.7	5.4	8.4	9.5	14.2	14.5	8.1	5.2	2.0	5.1	6.4	6.2	7.2	8.7	7.7	7.9	7.8	6.7	6.1	6.0	5.4	4.9	5.5	7.1	8.3	9.0	9.8
3.0	5.1	7.5	1.3	7.8	7.9	6.1	6.9	6.0	4.5	5.4	6.8	4.9	1.9	1.4	1.1	.9	3.5	4.2	3.8	6.5	7.5	7.3	7.4	7.8	8.2	7.6	6.7	7.5	6.4	6.1	8.9	6.9	6.0	5.6	1.3
1.9	1.8	1.8	1.7	1.6	5.0	4.0	4.4	4.4	5.6	6.6	6.6	6.1	4.7	1.7	1.2	1.0	5.4	6.9	8.3	6.6	7.9	8.0	7.9	6.5	6.7	6.0	6.9	6.8	6.7	6.3	11.6	4.9	2.4	2.0	2.1
2.3	2.3	2.3	2.0	1.7	3.3	8.0	7.3	5.7	6.0	6.2	1.9	1.3	1.3	1.3	1.3	1.4	6.1	5.7	4.4	6.1	8.5	7.5	6.0	6.8	12.7	6.3	6.7	7.5	5.8	6.2	6.5	4.7	2.2	2.4	2.2
1.9	1.7	1.4	1.3	1.1	1.3	3.1	7.5	4.3	3.1	1.7	1.5	1.4	1.3	1.3	1.2	4.4	4.6	6.3	6.7	5.8	7.3	5.6	8.1	9.5	6.3	10.8	10.3	7.6	7.1	3.6	1.8	2.0	2.1	2.3	2.4
1.2	1.3	1.7	1.7	1.5	1.5	1.7	2.9	4.5	2.7	2.0	1.7	1.6	1.4	1.3	1.4	4.5	6.5	6.8	7.1	6.8	5.6	6.0	4.3	1.3	4.4	2.8	2.9	3.6	2.0	2.2	1.9	1.7	1.6	1.5	1.5
2.1	1.7	1.5	1.5	1.6	1.4	1.4	1.6	1.8	1.9	3.1	2.7	2.1	1.7	1.7	1.9	1.9	2.0	2.3	4.2	3.8	5.2	4.5	1.7	2.1	2.7	2.7	2.8	2.2	2.1	2.1	2.3	2.5	2.4	2.4	2.2
1.8	1.7	1.4	1.3	1.2	1.2	1.2	1.1	1.2	1.6	3.3	1.8	2.1	3.0	2.4	1.3	1.1	1.0	1.2	1.9	2.6	3.5	2.0	2.0	2.1	2.2	2.3	2.0	2.1	1.8	1.7	2.2	2.4	2.1	2.5	2.2
2.0	2.0	2.1	1.8	1.3	.9	.8	.7	.7	.9	5.4	5.5	3.2	3.5	1.5	.8	.7	.8	1.2	2.7	2.6	3.1	2.7	2.0	1.9	1.7	1.7	1.4	1.3	2.1	2.8	3.3	3.1	2.4	2.5	2.3
1.9	2.1	1.8	1.9	1.7	1.5	1.4	1.2	.8	.8	1.6	7.8	3.5	2.9	1.9	1.5	1.1	.8	.8	3.5	4.8	3.2	2.5	1.7	1.3	1.1	.9	.8	1.3	3.3	5.2	4.7	4.1	2.5	2.3	2.2
1.5	1.6	1.8	1.9	2.0	2.3	2.4	2.4	2.0	1.7	3.0	5.4	3.4	2.2	2.1	2.2	2.2	2.2	1.9	2.1	2.8	2.3	2.2	2.0	2.2	2.3	2.3	2.2	2.0	3.1	3.2	4.3	5.3	2.4	1.6	2.1
2.3	2.0	1.9	1.8	1.9	1.9	1.8	1.7	1.8	1.9	3.7	4.1	2.4	2.6	2.9	3.0	3.2	3.1	2.9	3.8	4.3	3.7	3.3	3.7	3.8	3.7	2.9	2.6	2.3	2.0	1.9	2.0	2.6	2.2	2.7	2.9
1.7	2.1	2.6	2.7	2.2	1.8	1.4	1.2	1.1	1.2	1.8	2.2	2.0	1.5	1.4	1.5	1.2	1.1	1.1	.9	.7	.9	1.0	1.0	.9	1.0	1.2	1.2	1.1	1.0	1.3	1.5	1.9	2.1	1.7	1.2
1.8	1.2	.8	.9	1.0	1.3	1.4	1.6	1.8	2.0	2.6	4.5	1.8	1.0	.6	.6	.7	.9	.9	1.2	1.2	2.9	7.3	9.5	7.2	3.5	8.0	9.2	9.3	8.2	8.9	9.9	7.5	4.6	2.3	2.3
1.8	1.8	3.5	6.1	7.5	7.7	7.3	7.4	7.8	7.6	5.4	5.4	2.1	3.1	2.9	6.4	8.3	8.7	8.9	9.0	10.2	8.5	6.5	5.1	7.3	7.0	4.9	5.1	5.7	5.8	5.5	5.1	5.6	6.1	8.1	2.3
8.1	6.9	6.6	6.6	6.0	5.5	5.1	4.5	4.4	4.4	5.7	6.6	7.4	7.3	7.3	6.0	5.7	5.4	4.9	4.4	4.0	3.9	4.2	4.3	4.4	4.6	4.7	4.8	4.7	4.5	4.0	3.4	3.4	5.0	8.8	8.5

Figure 28. ATOVS MEAN O-B brightness temperature differences (deg C). JANUARY 2006
Channel: HIRS15 (700 hPa)
NOAA15, using all observations



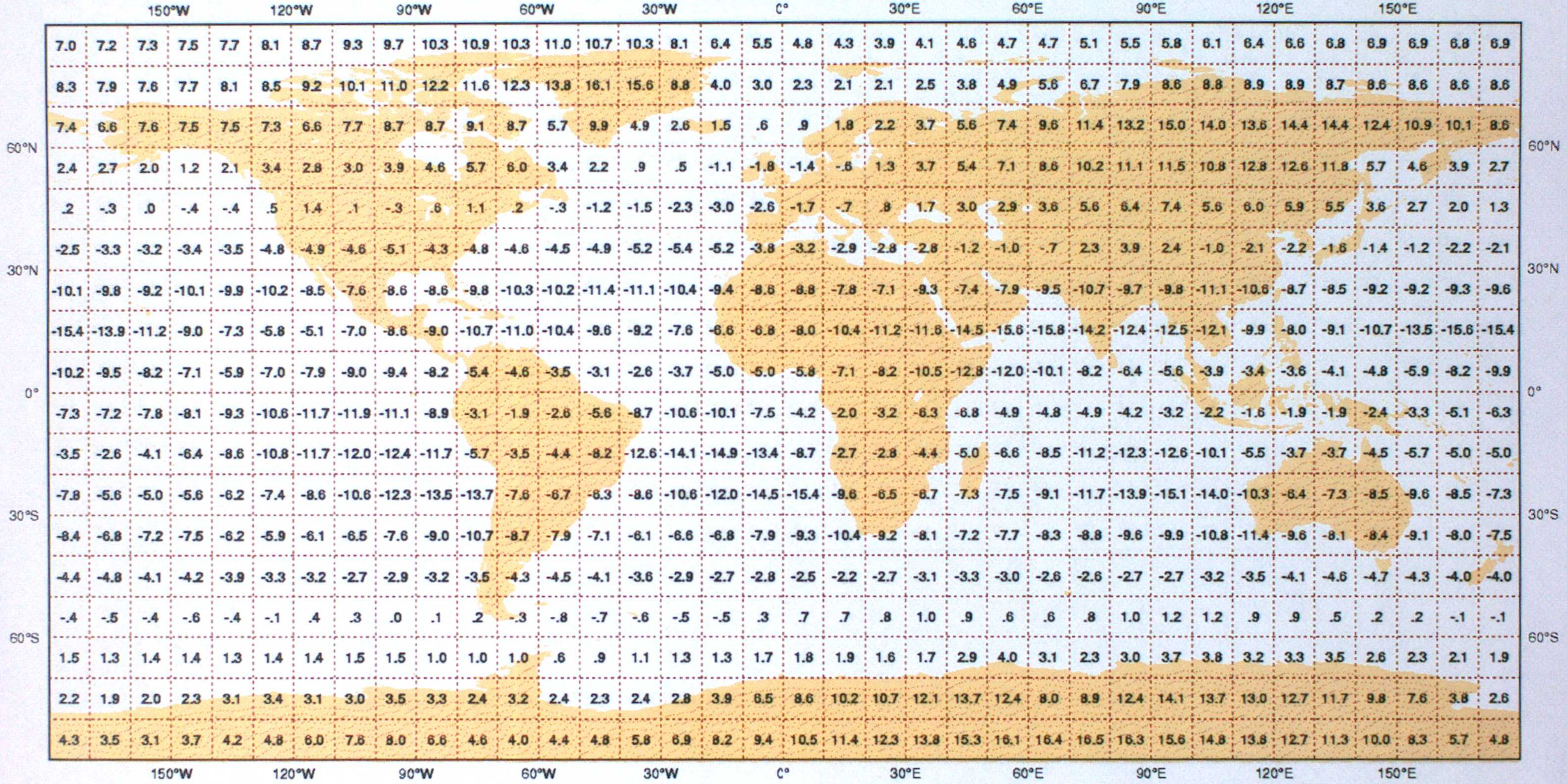
12.9	12.8	12.9	12.9	13.0	13.4	13.8	14.2	14.6	15.1	15.3	15.3	15.4	15.2	14.9	13.7	12.4	11.5	10.9	10.5	10.5	10.6	11.0	11.4	11.8	12.3	12.7	13.0	13.3	13.4	13.6	13.8	13.7	13.5	13.2	13.1
13.1	12.6	12.3	12.2	12.4	12.7	13.3	14.1	14.9	15.8	16.0	16.5	17.0	17.3	17.0	13.5	9.8	8.4	7.5	7.6	8.2	8.7	9.8	11.6	13.1	14.0	14.6	15.0	15.1	15.1	14.9	14.7	14.4	14.1	13.9	13.6
12.4	11.6	11.3	11.1	11.4	11.5	11.3	12.3	13.1	13.6	14.2	14.3	12.5	13.8	10.2	7.6	6.1	5.0	5.3	6.8	8.1	9.7	11.6	13.6	15.2	16.3	17.5	18.5	18.2	17.9	17.9	17.2	15.8	14.8	14.0	13.0
7.9	7.6	6.5	5.4	5.4	7.3	7.5	8.2	9.4	10.1	10.8	11.1	8.3	6.5	4.7	2.8	2.3	3.1	4.5	5.9	7.2	9.8	11.2	12.8	14.1	15.2	16.0	16.6	16.4	17.5	17.1	16.2	11.8	10.3	9.4	8.3
4.4	3.6	3.3	2.2	2.0	2.7	4.7	4.5	4.7	5.1	5.4	4.2	3.2	1.8	.6	.1	.4	2.4	3.9	5.3	6.8	7.3	8.6	9.2	10.2	11.3	11.8	12.4	11.9	12.5	12.7	11.9	9.8	7.9	6.5	5.7
-1.6	-2.3	-1.7	-2.1	-1.7	-1.5	.4	.9	-.6	-.6	-2.0	-3.0	-3.1	-3.3	-2.7	-2.0	-1.3	1.6	2.0	1.1	1.7	2.2	3.5	3.9	4.5	6.0	7.5	6.3	3.7	3.5	3.0	2.6	2.3	1.6	.1	-.9
-7.2	-7.1	-6.1	-5.8	-5.1	-5.2	-5.4	-4.8	-6.2	-6.5	-7.0	-7.0	-6.2	-5.9	-5.4	-4.7	-4.0	-2.5	-2.9	-3.7	-3.8	-5.7	-4.4	-4.6	-4.9	-5.6	-5.0	-5.4	-5.3	-5.6	-6.5	-6.8	-6.7	-6.7	-7.5	-7.7
-9.7	-9.2	-8.3	-8.0	-7.7	-7.8	-8.2	-8.7	-8.6	-8.8	-9.4	-9.1	-8.7	-8.4	-8.2	-8.2	-8.5	-8.6	-9.3	-9.8	-9.2	-10.2	-8.8	-9.1	-9.6	-9.6	-9.9	-10.2	-9.8	-10.2	-10.2	-10.6	-10.7	-10.8	-11.0	-10.6
-10.5	-10.4	-9.7	-9.3	-8.9	-9.0	-9.0	-9.3	-9.5	-9.7	-9.6	-9.6	-9.7	-9.7	-9.7	-9.7	-9.9	-10.1	-10.2	-10.6	-10.3	-10.2	-10.0	-9.9	-10.2	-10.1	-10.2	-10.3	-9.9	-10.3	-10.5	-10.8	-11.0	-11.2	-11.3	-11.2
-10.9	-10.4	-10.2	-9.5	-9.2	-9.2	-9.2	-9.2	-9.3	-9.6	-9.5	-9.9	-9.8	-9.9	-10.1	-10.1	-9.9	-10.1	-10.1	-9.9	-9.9	-9.8	-10.1	-9.8	-10.0	-10.1	-10.1	-10.2	-10.0	-10.3	-10.6	-10.5	-10.7	-11.2	-11.3	-11.3
-10.7	-9.7	-9.8	-9.0	-8.7	-8.6	-8.6	-8.9	-9.1	-9.7	-9.1	-9.5	-10.0	-9.4	-9.8	-9.8	-9.7	-10.2	-10.3	-9.9	-10.4	-10.0	-10.1	-10.0	-10.0	-10.1	-10.3	-10.6	-10.8	-11.2	-11.5	-11.2	-11.1	-11.0	-10.9	-11.1
-9.5	-8.5	-9.2	-8.2	-8.0	-7.7	-7.7	-8.0	-8.2	-8.9	-9.4	-9.2	-9.7	-8.9	-9.0	-8.8	-8.5	-9.1	-9.6	-10.0	-11.0	-10.0	-9.9	-8.9	-8.6	-8.7	-8.8	-9.1	-9.9	-11.1	-11.7	-11.6	-11.1	-10.1	-9.4	-9.5
-7.0	-6.4	-7.2	-6.7	-6.3	-5.8	-5.9	-5.8	-5.9	-6.2	-6.5	-7.7	-7.3	-6.9	-6.7	-6.3	-5.8	-6.1	-6.3	-6.7	-8.0	-7.5	-7.4	-6.8	-6.4	-6.3	-6.1	-6.3	-6.5	-7.0	-7.8	-8.5	-9.1	-8.0	-6.7	-6.8
-3.5	-3.6	-3.5	-3.4	-2.8	-2.2	-2.0	-1.7	-1.8	-2.0	-1.8	-3.0	-2.7	-2.6	-2.2	-1.9	-1.6	-1.3	-.7	-.6	-1.1	-1.2	-1.4	-1.8	-1.9	-1.8	-1.7	-1.4	-1.3	-1.4	-2.1	-2.6	-3.2	-3.3	-3.0	-3.2
.2	.3	1.1	.9	1.2	1.6	1.7	1.6	1.2	1.1	1.0	.6	.7	.8	1.2	1.4	1.6	2.2	2.8	2.8	3.0	2.9	3.0	2.8	2.8	3.0	2.9	2.9	2.8	2.6	2.4	2.0	1.9	1.5	.8	.5
2.6	2.6	2.9	2.9	2.9	2.9	3.0	2.9	2.8	2.8	2.8	3.0	2.9	2.8	2.9	3.1	3.3	3.7	3.8	3.8	3.9	4.1	4.7	5.1	4.6	4.3	5.1	5.5	5.4	4.9	4.9	5.0	4.3	3.7	3.2	2.8
4.0	3.7	3.8	4.0	4.4	4.6	4.6	4.7	5.2	5.2	4.8	5.0	4.2	4.2	4.2	4.7	5.6	7.0	7.9	8.7	9.1	9.8	10.5	10.1	8.5	8.7	10.1	10.8	10.6	10.3	10.1	9.7	8.8	7.7	5.5	4.4
5.9	5.6	5.4	5.6	5.8	6.1	6.7	7.5	7.7	7.2	6.3	6.0	6.0	6.2	6.7	7.2	7.8	8.3	8.9	9.3	9.7	10.3	10.9	11.2	11.3	11.3	11.2	11.0	10.7	10.3	9.9	9.3	8.7	8.0	6.7	6.2

Figure 29. ATOVS SD O-B brightness temperature differences (deg C). JANUARY 2006
Channel: HIRS15 (700 hPa)
NOAA15, using all observations



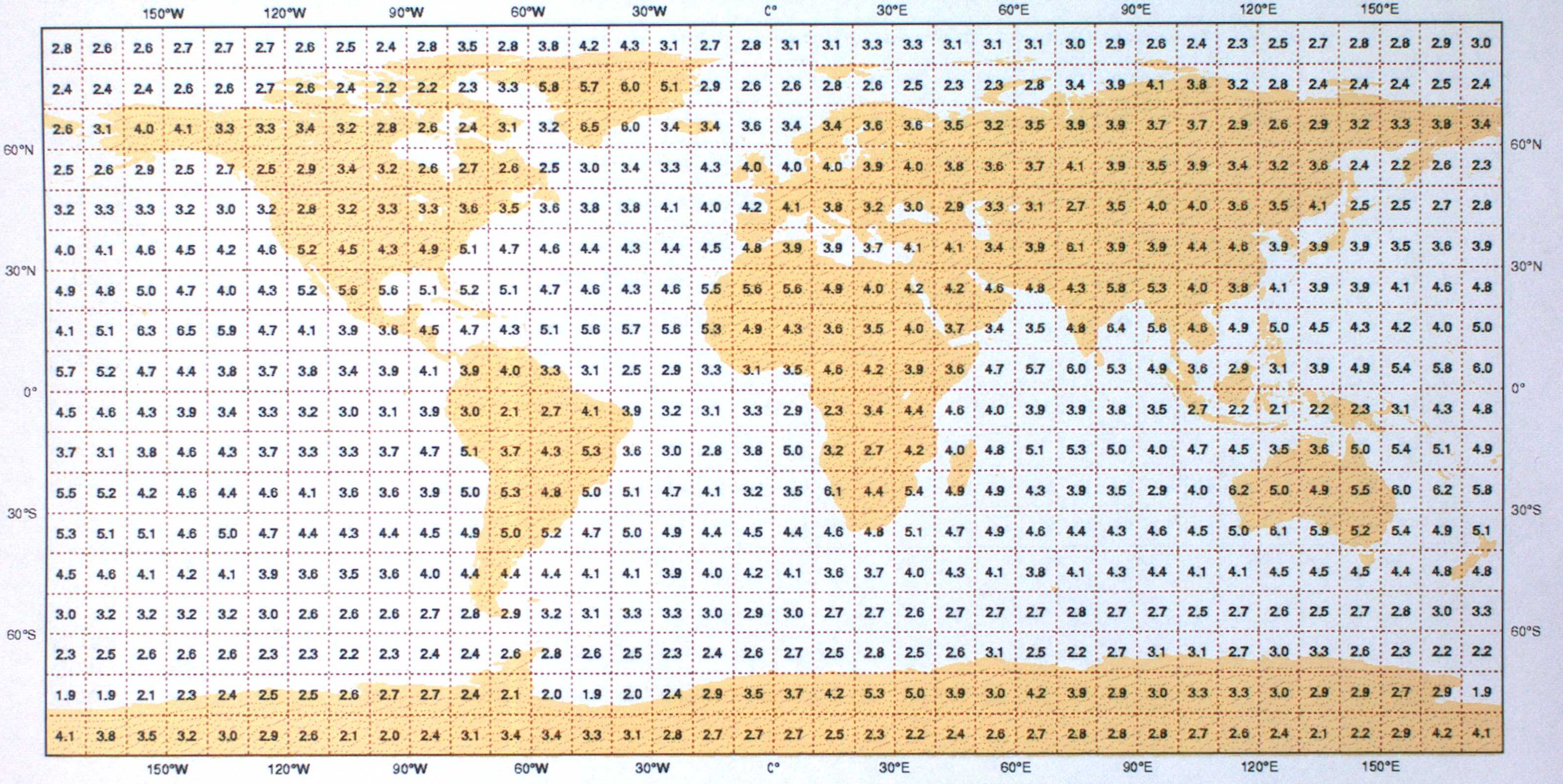
2.8	2.7	2.7	2.6	2.6	2.4	2.2	2.1	2.0	2.2	2.3	2.5	2.8	3.0	3.0	3.1	3.4	3.6	3.8	3.8	3.9	3.9	3.8	3.6	3.4	3.2	3.1	3.1	3.0	2.9	2.8	2.8	2.8	2.8	2.9	2.9
1.9	1.8	1.8	1.8	1.9	1.8	1.6	1.4	1.3	1.4	2.0	2.7	3.7	3.5	3.5	3.7	3.3	3.1	3.1	3.3	3.4	3.5	3.4	3.3	3.3	3.5	3.7	3.7	3.5	3.0	2.6	2.4	2.3	2.3	2.2	2.1
2.2	2.5	2.8	2.9	2.4	2.4	2.7	2.5	2.1	2.3	2.6	3.1	3.8	4.8	5.1	4.2	3.9	3.6	3.4	3.6	4.3	4.8	4.7	4.0	3.5	3.4	3.2	2.8	2.8	2.3	1.8	1.8	2.0	2.2	2.3	2.3
2.9	3.0	3.2	2.8	3.3	3.0	3.3	3.7	3.1	3.0	3.4	3.3	3.7	4.2	3.8	3.5	3.7	3.5	3.5	3.3	4.0	4.6	4.1	3.7	3.4	3.1	3.0	2.9	3.0	2.2	2.1	2.3	2.6	2.8	3.1	2.6
3.4	3.4	3.4	3.5	3.5	3.7	3.4	3.6	3.7	3.8	4.0	4.3	4.5	4.3	3.9	3.6	3.4	3.5	3.5	3.4	3.4	3.8	3.6	3.5	3.2	3.1	3.4	3.5	3.6	3.4	3.2	3.6	2.9	3.0	3.2	3.3
4.3	3.7	3.9	3.8	3.9	4.0	4.2	4.1	3.8	4.2	4.5	4.1	3.9	3.7	3.6	3.5	3.5	3.4	3.2	3.5	3.9	4.4	4.3	3.6	4.1	5.5	3.7	4.0	4.1	3.9	4.6	4.7	4.4	4.0	4.2	4.7
3.8	3.5	3.6	3.7	3.6	3.7	3.7	3.7	3.5	3.7	3.8	3.7	3.6	3.5	3.7	3.8	3.6	3.7	3.8	3.8	4.0	4.2	4.0	4.3	4.6	4.0	5.1	4.9	3.8	3.8	4.0	3.8	3.9	3.7	3.6	4.0
3.6	3.5	3.5	3.5	3.5	3.5	3.5	3.6	3.6	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.6	3.8	3.7	3.6	4.0	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.4	3.3	3.4	3.4	3.4	3.4	3.3	3.4
3.5	3.4	3.4	3.4	3.5	3.4	3.5	3.4	3.5	3.4	3.4	3.5	3.4	3.5	3.4	3.4	3.5	3.4	3.5	3.5	3.8	3.5	3.5	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.5	3.4	3.4	3.4
3.5	3.5	3.4	3.5	3.5	3.5	3.4	3.4	3.4	3.4	3.4	3.5	3.4	3.5	3.5	3.4	3.4	3.4	3.4	3.6	3.5	3.4	3.4	3.4	3.4	3.4	3.5	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.5	3.4
3.5	3.6	3.5	3.6	3.6	3.6	3.5	3.4	3.4	3.4	3.4	3.6	3.4	3.6	3.5	3.4	3.4	3.3	3.3	3.6	3.4	3.5	3.4	3.5	3.4	3.4	3.4	3.3	3.4	3.4	3.5	3.5	3.5	3.4	3.5	3.4
3.5	3.6	3.3	3.5	3.5	3.6	3.6	3.5	3.5	3.4	3.2	3.8	3.6	3.5	3.5	3.5	3.5	3.4	3.3	3.7	3.5	3.5	3.5	3.6	3.5	3.4	3.4	3.3	3.4	3.6	3.6	3.7	3.7	3.5	3.5	3.5
3.7	3.6	3.4	3.5	3.3	3.5	3.5	3.5	3.6	3.6	3.5	3.8	3.7	3.9	3.8	3.5	3.6	3.8	3.7	3.7	3.5	3.8	3.6	3.5	3.4	3.4	3.7	3.8	3.6	3.6	3.6	3.8	4.0	3.7	3.6	3.6
4.1	4.0	3.9	3.7	3.5	3.5	3.5	3.5	3.6	3.6	3.6	3.7	3.6	3.6	3.5	3.4	3.6	3.7	3.8	3.6	3.8	3.9	4.1	4.1	4.1	4.1	4.1	4.0	3.6	3.6	3.7	3.7	3.9	4.2	4.2	4.2
3.1	3.5	3.4	3.1	3.0	3.0	2.8	2.6	2.6	3.0	3.1	3.0	2.9	2.9	3.0	2.9	2.6	2.9	2.9	2.8	2.7	2.7	2.7	2.8	2.8	2.8	2.9	2.8	2.7	2.7	2.8	2.6	2.8	3.1	3.3	3.1
2.5	2.5	2.4	2.2	2.2	2.2	2.1	2.0	2.1	2.3	2.5	2.5	2.5	2.4	2.3	2.2	2.3	2.4	2.4	2.2	2.1	2.1	2.3	2.5	2.3	2.0	2.3	2.5	2.5	2.5	2.6	2.7	2.4	2.2	2.3	2.4
2.0	2.0	2.0	2.0	2.1	2.1	2.0	2.0	1.9	1.8	1.7	1.7	1.6	1.6	1.6	1.8	1.9	2.0	2.1	2.1	2.3	2.0	1.6	1.2	1.8	1.8	1.3	1.2	1.4	1.4	1.4	1.3	1.6	1.8	2.1	1.8
2.1	2.1	2.1	2.1	2.0	1.9	1.7	1.4	1.3	1.4	1.7	1.9	2.0	2.0	2.0	1.8	1.6	1.5	1.3	1.1	.9	.8	.9	1.0	1.0	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.1	1.4	2.1	2.1

Figure 30. ATOVS MEAN O-B brightness temperature differences (deg C). JANUARY 2006
Channel: HIRS11 (500 - 700 hPa)
NOAA15, using all observations



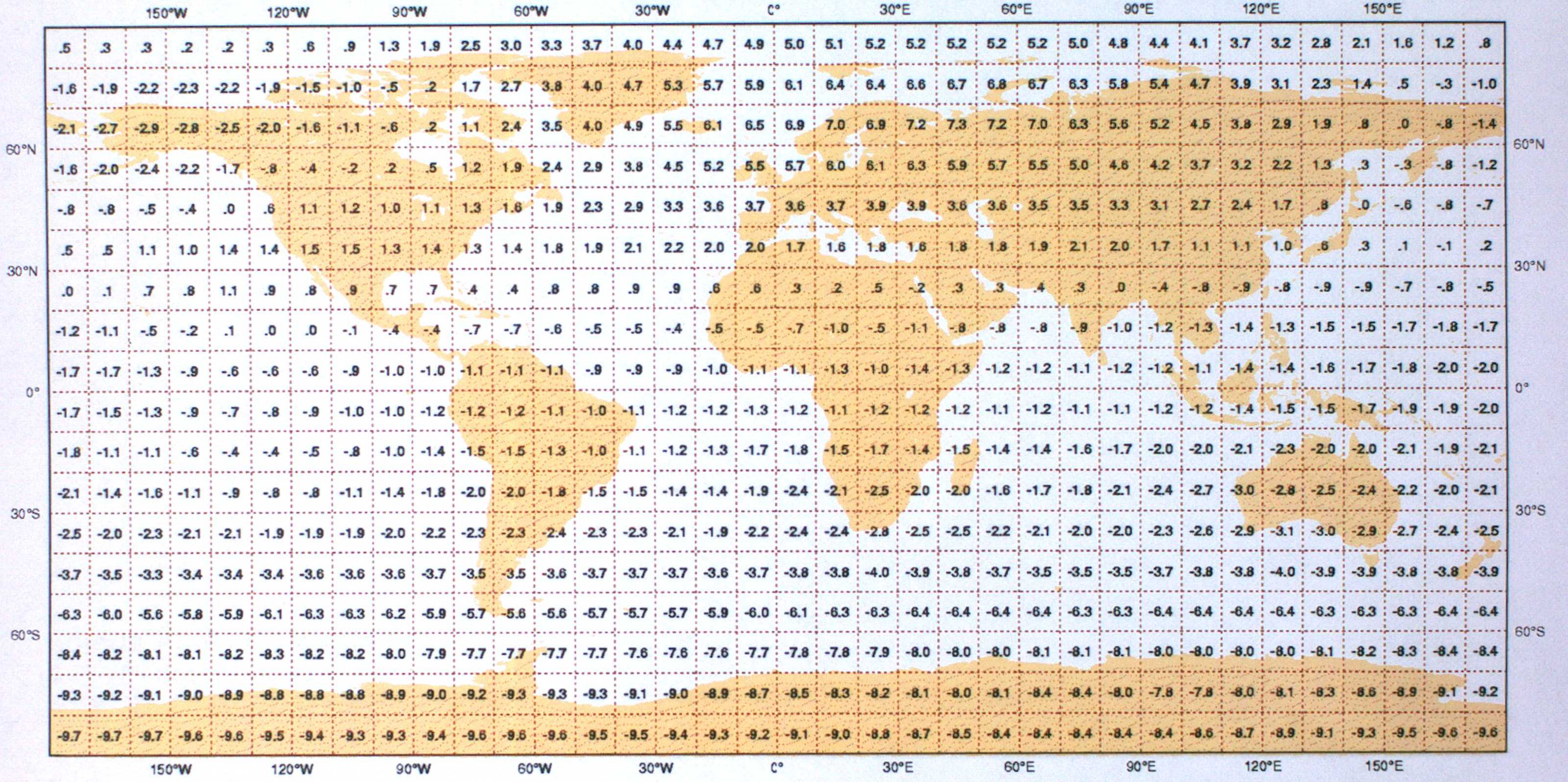
7.0	7.2	7.3	7.5	7.7	8.1	8.7	9.3	9.7	10.3	10.9	10.3	11.0	10.7	10.3	8.1	6.4	5.5	4.8	4.3	3.9	4.1	4.6	4.7	4.7	5.1	5.5	5.8	6.1	6.4	6.6	6.8	6.9	6.9	6.8	6.9
8.3	7.9	7.6	7.7	8.1	8.5	9.2	10.1	11.0	12.2	11.6	12.3	13.8	16.1	15.6	8.8	4.0	3.0	2.3	2.1	2.1	2.5	3.8	4.9	5.6	6.7	7.9	8.6	8.8	8.9	8.9	8.7	8.6	8.6	8.6	8.6
7.4	6.6	7.6	7.5	7.5	7.3	6.6	7.7	8.7	8.7	9.1	8.7	5.7	9.9	4.9	2.6	1.5	.6	.9	1.8	2.2	3.7	5.6	7.4	9.6	11.4	13.2	15.0	14.0	13.6	14.4	14.4	12.4	10.9	10.1	8.6
2.4	2.7	2.0	1.2	2.1	3.4	2.8	3.0	3.9	4.6	5.7	6.0	3.4	2.2	.9	.5	-1.1	-1.8	-1.4	-.6	1.3	3.7	5.4	7.1	8.6	10.2	11.1	11.5	10.8	12.8	12.6	11.8	5.7	4.6	3.9	2.7
.2	-.3	.0	-.4	-.4	.5	1.4	.1	-.3	.6	1.1	.2	-.3	-1.2	-1.5	-2.3	-3.0	-2.6	-1.7	-.7	.8	1.7	3.0	2.9	3.6	5.6	6.4	7.4	5.6	6.0	5.9	5.5	3.6	2.7	2.0	1.3
-2.5	-3.3	-3.2	-3.4	-3.5	-4.8	-4.9	-4.6	-5.1	-4.3	-4.8	-4.6	-4.5	-4.9	-5.2	-5.4	-5.2	-3.8	-3.2	-2.9	-2.8	-2.8	-1.2	-1.0	-.7	2.3	3.9	2.4	-1.0	-2.1	-2.2	-1.6	-1.4	-1.2	-2.2	-2.1
-10.1	-9.8	-9.2	-10.1	-9.9	-10.2	-8.5	-7.6	-8.6	-8.6	-9.8	-10.3	-10.2	-11.4	-11.1	-10.4	-9.4	-8.6	-8.8	-7.8	-7.1	-9.3	-7.4	-7.9	-9.5	-10.7	-9.7	-9.8	-11.1	-10.6	-8.7	-8.5	-9.2	-9.2	-9.3	-9.6
-15.4	-13.9	-11.2	-9.0	-7.3	-5.8	-5.1	-7.0	-8.6	-9.0	-10.7	-11.0	-10.4	-9.6	-9.2	-7.6	-6.6	-6.8	-8.0	-10.4	-11.2	-11.6	-14.5	-15.6	-15.8	-14.2	-12.4	-12.5	-12.1	-9.9	-8.0	-9.1	-10.7	-13.5	-15.6	-15.4
-10.2	-9.5	-8.2	-7.1	-5.9	-7.0	-7.9	-9.0	-9.4	-8.2	-5.4	-4.6	-3.5	-3.1	-2.6	-3.7	-5.0	-5.0	-5.8	-7.1	-8.2	-10.5	-12.8	-12.0	-10.1	-8.2	-6.4	-5.6	-3.9	-3.4	-3.6	-4.1	-4.8	-5.9	-8.2	-9.9
-7.3	-7.2	-7.8	-8.1	-9.3	-10.6	-11.7	-11.9	-11.1	-8.9	-3.1	-1.9	-2.6	-5.6	-8.7	-10.6	-10.1	-7.5	-4.2	-2.0	-3.2	-6.3	-6.8	-4.9	-4.8	-4.9	-4.2	-3.2	-2.2	-1.6	-1.9	-1.9	-2.4	-3.3	-5.1	-6.3
-3.5	-2.6	-4.1	-6.4	-8.6	-10.8	-11.7	-12.0	-12.4	-11.7	-5.7	-3.5	-4.4	-8.2	-12.6	-14.1	-14.9	-13.4	-8.7	-2.7	-2.8	-4.4	-5.0	-6.6	-8.5	-11.2	-12.3	-12.6	-10.1	-5.5	-3.7	-3.7	-4.5	-5.7	-5.0	-5.0
-7.8	-5.6	-5.0	-5.6	-6.2	-7.4	-8.6	-10.6	-12.3	-13.5	-13.7	-7.6	-6.7	-6.3	-8.6	-10.6	-12.0	-14.5	-15.4	-9.6	-6.5	-6.7	-7.3	-7.5	-9.1	-11.7	-13.9	-15.1	-14.0	-10.3	-6.4	-7.3	-8.5	-9.6	-8.5	-7.3
-8.4	-6.8	-7.2	-7.5	-6.2	-5.9	-6.1	-6.5	-7.6	-9.0	-10.7	-8.7	-7.9	-7.1	-6.1	-6.6	-6.8	-7.9	-9.3	-10.4	-9.2	-8.1	-7.2	-7.7	-8.3	-8.8	-9.6	-9.9	-10.8	-11.4	-9.6	-8.1	-8.4	-9.1	-8.0	-7.5
-4.4	-4.8	-4.1	-4.2	-3.9	-3.3	-3.2	-2.7	-2.9	-3.2	-3.5	-4.3	-4.5	-4.1	-3.6	-2.9	-2.7	-2.8	-2.5	-2.2	-2.7	-3.1	-3.3	-3.0	-2.6	-2.6	-2.7	-2.7	-3.2	-3.5	-4.1	-4.6	-4.7	-4.3	-4.0	-4.0
-.4	-.5	-.4	-.6	-.4	-.1	.4	.3	.0	.1	.2	-.3	-.8	-.7	-.6	-.5	-.5	.3	.7	.7	.8	1.0	.9	.6	.6	.8	1.0	1.2	1.2	.9	.9	.5	.2	.2	-.1	-.1
1.5	1.3	1.4	1.4	1.3	1.4	1.4	1.5	1.5	1.0	1.0	1.0	.6	.9	1.1	1.3	1.3	1.7	1.8	1.9	1.6	1.7	2.9	4.0	3.1	2.3	3.0	3.7	3.8	3.2	3.3	3.5	2.6	2.3	2.1	1.9
2.2	1.9	2.0	2.3	3.1	3.4	3.1	3.0	3.5	3.3	2.4	3.2	2.4	2.3	2.4	2.8	3.9	6.5	8.6	10.2	10.7	12.1	13.7	12.4	8.0	8.9	12.4	14.1	13.7	13.0	12.7	11.7	9.8	7.6	3.8	2.6
4.3	3.5	3.1	3.7	4.2	4.8	6.0	7.6	8.0	6.6	4.6	4.0	4.4	4.8	5.8	6.9	8.2	9.4	10.5	11.4	12.3	13.8	15.3	16.1	16.4	16.5	16.3	15.6	14.8	13.8	12.7	11.3	10.0	8.3	5.7	4.8

Figure 31. ATOVS SD O-B brightness temperature differences (deg C). JANUARY 2006
Channel: HIRS11 (500 - 700 hPa)
NOAA15, using all observations



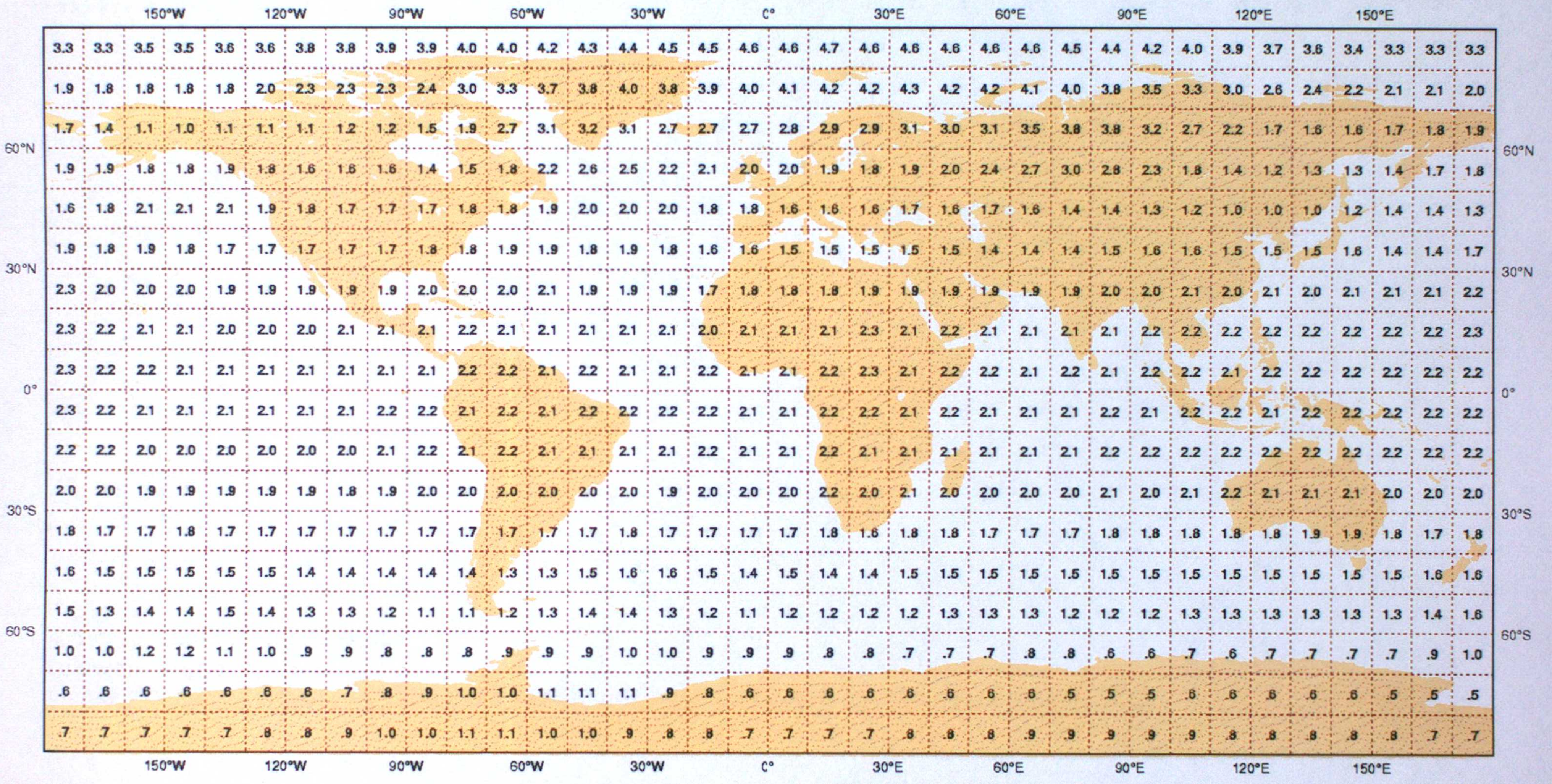
2.8	2.6	2.6	2.7	2.7	2.7	2.6	2.5	2.4	2.8	3.5	2.8	3.8	4.2	4.3	3.1	2.7	2.8	3.1	3.1	3.3	3.3	3.1	3.1	3.1	3.0	2.9	2.6	2.4	2.3	2.5	2.7	2.8	2.8	2.9	3.0
2.4	2.4	2.4	2.6	2.6	2.7	2.6	2.4	2.2	2.2	2.3	3.3	5.8	5.7	6.0	5.1	2.9	2.6	2.6	2.8	2.6	2.5	2.3	2.3	2.8	3.4	3.9	4.1	3.8	3.2	2.8	2.4	2.4	2.4	2.5	2.4
2.6	3.1	4.0	4.1	3.3	3.3	3.4	3.2	2.8	2.6	2.4	3.1	3.2	6.5	6.0	3.4	3.4	3.6	3.4	3.4	3.6	3.6	3.5	3.2	3.5	3.9	3.9	3.7	3.7	2.9	2.6	2.9	3.2	3.3	3.8	3.4
2.5	2.6	2.9	2.5	2.7	2.5	2.9	3.4	3.2	2.6	2.7	2.6	2.5	3.0	3.4	3.3	4.3	4.0	4.0	4.0	3.9	4.0	3.8	3.6	3.7	4.1	3.9	3.5	3.9	3.4	3.2	3.6	2.4	2.2	2.6	2.3
3.2	3.3	3.3	3.2	3.0	3.2	2.8	3.2	3.3	3.3	3.6	3.5	3.6	3.8	3.8	4.1	4.0	4.2	4.1	3.8	3.2	3.0	2.9	3.3	3.1	2.7	3.5	4.0	4.0	3.6	3.5	4.1	2.5	2.5	2.7	2.8
4.0	4.1	4.6	4.5	4.2	4.6	5.2	4.5	4.3	4.9	5.1	4.7	4.6	4.4	4.3	4.4	4.5	4.8	3.9	3.9	3.7	4.1	4.1	3.4	3.9	6.1	3.9	3.9	4.4	4.6	3.9	3.9	3.9	3.5	3.6	3.9
4.9	4.8	5.0	4.7	4.0	4.3	5.2	5.6	5.6	5.1	5.2	5.1	4.7	4.6	4.3	4.6	5.5	5.6	5.6	4.9	4.0	4.2	4.2	4.6	4.8	4.3	5.8	5.3	4.0	3.8	4.1	3.9	3.9	4.1	4.6	4.8
4.1	5.1	6.3	6.5	5.9	4.7	4.1	3.9	3.6	4.5	4.7	4.3	5.1	5.6	5.7	5.6	5.3	4.9	4.3	3.6	3.5	4.0	3.7	3.4	3.5	4.8	6.4	5.6	4.6	4.9	5.0	4.5	4.3	4.2	4.0	5.0
5.7	5.2	4.7	4.4	3.8	3.7	3.8	3.4	3.9	4.1	3.9	4.0	3.3	3.1	2.5	2.9	3.3	3.1	3.5	4.6	4.2	3.9	3.6	4.7	5.7	6.0	5.3	4.9	3.6	2.9	3.1	3.9	4.9	5.4	5.8	6.0
4.5	4.6	4.3	3.9	3.4	3.3	3.2	3.0	3.1	3.9	3.0	2.1	2.7	4.1	3.9	3.2	3.1	3.3	2.9	2.3	3.4	4.4	4.6	4.0	3.9	3.9	3.8	3.5	2.7	2.2	2.1	2.2	2.3	3.1	4.3	4.8
3.7	3.1	3.8	4.6	4.3	3.7	3.3	3.3	3.7	4.7	5.1	3.7	4.3	5.3	3.6	3.0	2.8	3.8	5.0	3.2	2.7	4.2	4.0	4.8	5.1	5.3	5.0	4.0	4.7	4.5	3.5	3.6	5.0	5.4	5.1	4.9
5.5	5.2	4.2	4.6	4.4	4.6	4.1	3.6	3.6	3.9	5.0	5.3	4.8	5.0	5.1	4.7	4.1	3.2	3.5	6.1	4.4	5.4	4.9	4.9	4.3	3.9	3.5	2.9	4.0	6.2	5.0	4.9	5.5	6.0	6.2	5.8
5.3	5.1	5.1	4.6	5.0	4.7	4.4	4.3	4.4	4.5	4.9	5.0	5.2	4.7	5.0	4.9	4.4	4.5	4.4	4.6	4.8	5.1	4.7	4.9	4.6	4.4	4.3	4.6	4.5	5.0	6.1	5.9	5.2	5.4	4.9	5.1
4.5	4.6	4.1	4.2	4.1	3.9	3.6	3.5	3.6	4.0	4.4	4.4	4.4	4.1	4.1	3.9	4.0	4.2	4.1	3.6	3.7	4.0	4.3	4.1	3.8	4.1	4.3	4.4	4.1	4.1	4.5	4.5	4.5	4.4	4.8	4.8
3.0	3.2	3.2	3.2	3.2	3.0	2.6	2.6	2.6	2.7	2.8	2.9	3.2	3.1	3.3	3.3	3.0	2.9	3.0	2.7	2.7	2.6	2.7	2.7	2.7	2.8	2.7	2.7	2.5	2.7	2.6	2.5	2.7	2.8	3.0	3.3
2.3	2.5	2.6	2.6	2.6	2.3	2.3	2.2	2.3	2.4	2.4	2.6	2.8	2.6	2.5	2.3	2.4	2.6	2.7	2.5	2.8	2.5	2.6	3.1	2.5	2.2	2.7	3.1	3.1	2.7	3.0	3.3	2.6	2.3	2.2	2.2
1.9	1.9	2.1	2.3	2.4	2.5	2.5	2.6	2.7	2.7	2.4	2.1	2.0	1.9	2.0	2.4	2.9	3.5	3.7	4.2	5.3	5.0	3.9	3.0	4.2	3.9	2.9	3.0	3.3	3.3	3.0	2.9	2.9	2.7	2.9	1.9
4.1	3.8	3.5	3.2	3.0	2.9	2.6	2.1	2.0	2.4	3.1	3.4	3.4	3.3	3.1	2.8	2.7	2.7	2.7	2.5	2.3	2.2	2.4	2.6	2.7	2.8	2.8	2.8	2.7	2.6	2.4	2.1	2.2	2.9	4.2	4.1

Figure 32. ATOVS MEAN O-B brightness temperature differences (deg C). JANUARY 2006
Channel: HIRS4 (400 hPa)
NOAA15, using all observations



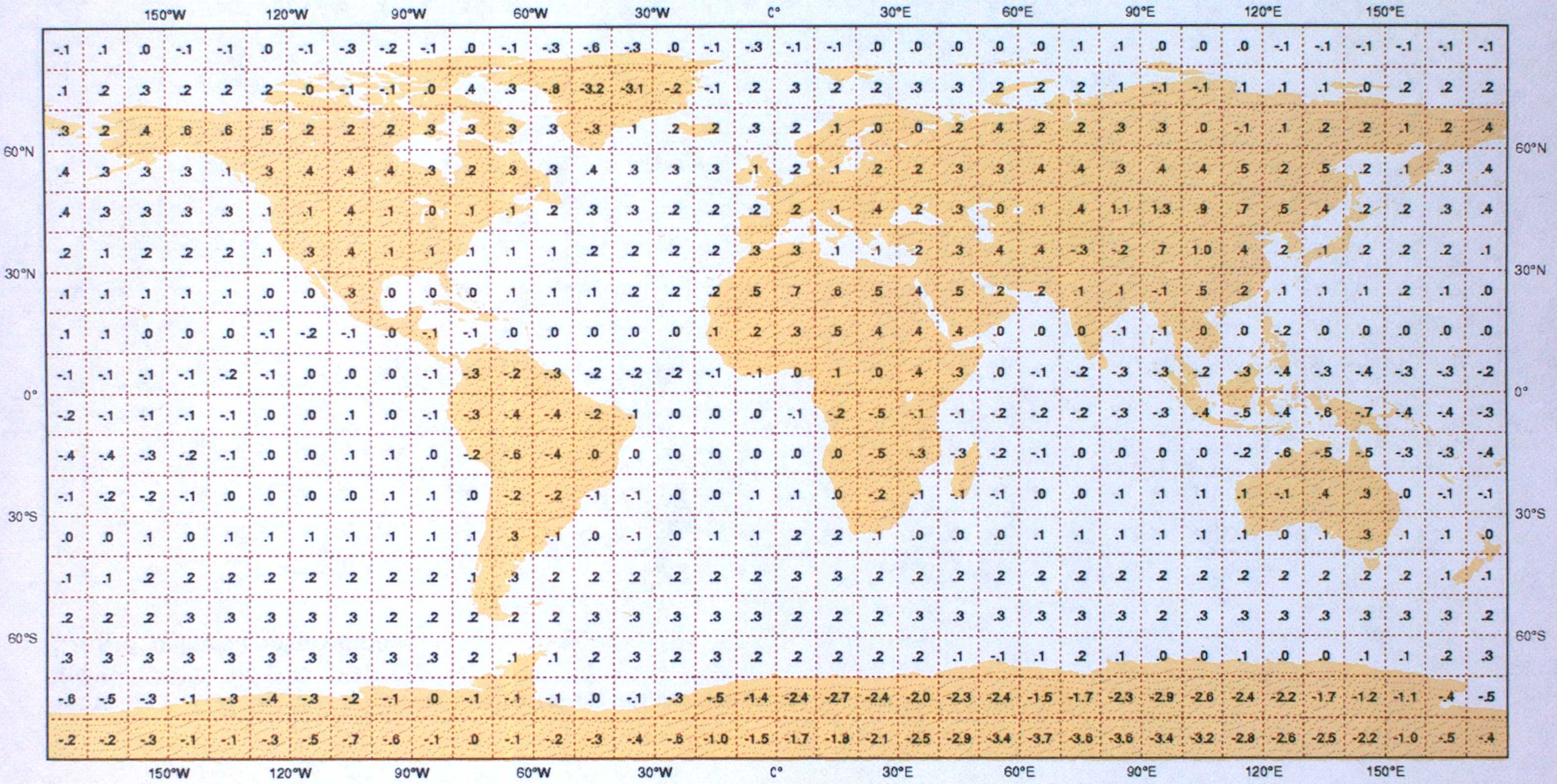
.5	.3	.3	.2	.2	.3	.6	.9	1.3	1.9	2.5	3.0	3.3	3.7	4.0	4.4	4.7	4.9	5.0	5.1	5.2	5.2	5.2	5.2	5.2	5.0	4.8	4.4	4.1	3.7	3.2	2.8	2.1	1.6	1.2	.8
-1.6	-1.9	-2.2	-2.3	-2.2	-1.9	-1.5	-1.0	-.5	.2	1.7	2.7	3.8	4.0	4.7	5.3	5.7	5.9	6.1	6.4	6.4	6.6	6.7	6.8	6.7	6.3	5.8	5.4	4.7	3.9	3.1	2.3	1.4	.5	-.3	-1.0
-2.1	-2.7	-2.9	-2.8	-2.5	-2.0	-1.6	-1.1	-.6	.2	1.1	2.4	3.5	4.0	4.9	5.5	6.1	6.5	6.9	7.0	6.9	7.2	7.3	7.2	7.0	6.3	5.6	5.2	4.5	3.8	2.9	1.9	.8	.0	-.8	-1.4
-1.6	-2.0	-2.4	-2.2	-1.7	-.8	-.4	-.2	.2	.5	1.2	1.9	2.4	2.9	3.8	4.5	5.2	5.5	5.7	6.0	6.1	6.3	5.9	5.7	5.5	5.0	4.6	4.2	3.7	3.2	2.2	1.3	.3	-.3	-.8	-1.2
-.8	-.8	-.5	-.4	.0	.6	1.1	1.2	1.0	1.1	1.3	1.6	1.9	2.3	2.9	3.3	3.6	3.7	3.6	3.7	3.9	3.9	3.6	3.6	3.5	3.5	3.3	3.1	2.7	2.4	1.7	.8	.0	-.6	-.8	-.7
.5	.5	1.1	1.0	1.4	1.4	1.5	1.5	1.3	1.4	1.3	1.4	1.8	1.9	2.1	2.2	2.0	2.0	1.7	1.6	1.8	1.6	1.8	1.8	1.9	2.1	2.0	1.7	1.1	1.1	1.0	.6	.3	.1	-.1	.2
.0	.1	.7	.8	1.1	.9	.8	.9	.7	.7	.4	.4	.8	.8	.9	.9	.6	.6	.3	.2	.5	-.2	.3	.3	.4	.3	.0	-.4	-.8	-.9	-.8	-.9	-.9	-.7	-.8	-.5
-1.2	-1.1	-.5	-.2	.1	.0	.0	-.1	-.4	-.4	-.7	-.7	-.6	-.5	-.5	-.4	-.5	-.5	-.7	-1.0	-.5	-1.1	-.8	-.8	-.8	-.9	-1.0	-1.2	-1.3	-1.4	-1.3	-1.5	-1.5	-1.7	-1.8	-1.7
-1.7	-1.7	-1.3	-.9	-.6	-.6	-.6	-.9	-1.0	-1.0	-1.1	-1.1	-1.1	-.9	-.9	-.9	-1.0	-1.1	-1.1	-1.3	-1.0	-1.4	-1.3	-1.2	-1.2	-1.1	-1.2	-1.2	-1.1	-1.4	-1.4	-1.6	-1.7	-1.8	-2.0	-2.0
-1.7	-1.5	-1.3	-.9	-.7	-.8	-.9	-1.0	-1.0	-1.2	-1.2	-1.2	-1.1	-1.0	-1.1	-1.2	-1.2	-1.3	-1.2	-1.1	-1.2	-1.2	-1.2	-1.1	-1.2	-1.1	-1.1	-1.2	-1.2	-1.4	-1.5	-1.5	-1.7	-1.9	-1.9	-2.0
-1.8	-1.1	-1.1	-.6	-.4	-.4	-.5	-.8	-1.0	-1.4	-1.5	-1.5	-1.3	-1.0	-1.1	-1.2	-1.3	-1.7	-1.8	-1.5	-1.7	-1.4	-1.5	-1.4	-1.4	-1.6	-1.7	-2.0	-2.0	-2.1	-2.3	-2.0	-2.0	-2.1	-1.9	-2.1
-2.1	-1.4	-1.6	-1.1	-.9	-.8	-.8	-1.1	-1.4	-1.8	-2.0	-2.0	-1.8	-1.5	-1.5	-1.4	-1.4	-1.9	-2.4	-2.1	-2.5	-2.0	-2.0	-1.6	-1.7	-1.8	-2.1	-2.4	-2.7	-3.0	-2.8	-2.5	-2.4	-2.2	-2.0	-2.1
-2.5	-2.0	-2.3	-2.1	-2.1	-1.9	-1.9	-1.9	-2.0	-2.2	-2.3	-2.3	-2.4	-2.3	-2.3	-2.1	-1.9	-2.2	-2.4	-2.4	-2.8	-2.5	-2.5	-2.2	-2.1	-2.0	-2.0	-2.3	-2.6	-2.9	-3.1	-3.0	-2.9	-2.7	-2.4	-2.5
-3.7	-3.5	-3.3	-3.4	-3.4	-3.4	-3.6	-3.6	-3.6	-3.7	-3.5	-3.5	-3.6	-3.7	-3.7	-3.7	-3.6	-3.7	-3.8	-3.8	-4.0	-3.9	-3.8	-3.7	-3.5	-3.5	-3.5	-3.7	-3.8	-3.8	-4.0	-3.9	-3.9	-3.8	-3.8	-3.9
-6.3	-6.0	-5.6	-5.8	-5.9	-6.1	-6.3	-6.3	-6.2	-5.9	-5.7	-5.6	-5.6	-5.7	-5.7	-5.7	-5.9	-6.0	-6.1	-6.3	-6.3	-6.4	-6.4	-6.4	-6.4	-6.3	-6.3	-6.4	-6.4	-6.4	-6.4	-6.3	-6.3	-6.3	-6.4	-6.4
-8.4	-8.2	-8.1	-8.1	-8.2	-8.3	-8.2	-8.2	-8.0	-7.9	-7.7	-7.7	-7.7	-7.7	-7.6	-7.6	-7.6	-7.7	-7.8	-7.8	-7.9	-8.0	-8.0	-8.0	-8.1	-8.1	-8.1	-8.0	-8.0	-8.0	-8.0	-8.1	-8.2	-8.3	-8.4	-8.4
-9.3	-9.2	-9.1	-9.0	-8.9	-8.8	-8.8	-8.8	-8.9	-9.0	-9.2	-9.3	-9.3	-9.3	-9.1	-9.0	-8.9	-8.7	-8.5	-8.3	-8.2	-8.1	-8.0	-8.1	-8.4	-8.4	-8.0	-7.8	-7.8	-8.0	-8.1	-8.3	-8.6	-8.9	-9.1	-9.2
-9.7	-9.7	-9.7	-9.6	-9.6	-9.5	-9.4	-9.3	-9.3	-9.4	-9.6	-9.6	-9.6	-9.5	-9.5	-9.4	-9.3	-9.2	-9.1	-9.0	-8.8	-8.7	-8.5	-8.4	-8.4	-8.4	-8.4	-8.4	-8.6	-8.7	-8.9	-9.1	-9.3	-9.5	-9.6	-9.6

Figure 33. ATOVS SD O-B brightness temperature differences (deg C). JANUARY 2006
Channel: HIRS4 (400 hPa)
NOAA15, using all observations



3.3	3.3	3.5	3.5	3.6	3.6	3.8	3.8	3.9	3.9	4.0	4.0	4.2	4.3	4.4	4.5	4.5	4.6	4.6	4.7	4.6	4.6	4.6	4.6	4.6	4.5	4.4	4.2	4.0	3.9	3.7	3.6	3.4	3.3	3.3	3.3
1.9	1.8	1.8	1.8	1.8	2.0	2.3	2.3	2.3	2.4	3.0	3.3	3.7	3.8	4.0	3.8	3.9	4.0	4.1	4.2	4.2	4.3	4.2	4.2	4.1	4.0	3.8	3.5	3.3	3.0	2.6	2.4	2.2	2.1	2.1	2.0
1.7	1.4	1.1	1.0	1.1	1.1	1.1	1.2	1.2	1.5	1.9	2.7	3.1	3.2	3.1	2.7	2.7	2.7	2.8	2.9	2.9	3.1	3.0	3.1	3.5	3.8	3.8	3.2	2.7	2.2	1.7	1.6	1.6	1.7	1.8	1.9
1.9	1.9	1.8	1.8	1.9	1.8	1.6	1.6	1.6	1.4	1.5	1.8	2.2	2.6	2.5	2.2	2.1	2.0	2.0	1.9	1.8	1.9	2.0	2.4	2.7	3.0	2.8	2.3	1.8	1.4	1.2	1.3	1.3	1.4	1.7	1.8
1.6	1.8	2.1	2.1	2.1	1.9	1.8	1.7	1.7	1.7	1.8	1.8	1.9	2.0	2.0	2.0	1.8	1.8	1.6	1.6	1.6	1.7	1.6	1.7	1.6	1.4	1.4	1.3	1.2	1.0	1.0	1.0	1.2	1.4	1.4	1.3
1.9	1.8	1.9	1.8	1.7	1.7	1.7	1.7	1.7	1.8	1.8	1.9	1.9	1.8	1.9	1.8	1.6	1.6	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.5	1.6	1.6	1.5	1.5	1.5	1.6	1.4	1.4	1.7
2.3	2.0	2.0	2.0	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.0	2.1	1.9	1.9	1.9	1.7	1.8	1.8	1.8	1.9	1.9	1.9	1.9	1.9	1.9	2.0	2.0	2.1	2.0	2.1	2.0	2.1	2.1	2.1	2.2
2.3	2.2	2.1	2.1	2.0	2.0	2.0	2.1	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.0	2.1	2.1	2.1	2.3	2.1	2.2	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.3
2.3	2.2	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.2	2.1	2.1	2.2	2.1	2.1	2.2	2.3	2.1	2.2	2.2	2.1	2.2	2.1	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.2	2.2
2.3	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.1	2.2	2.1	2.2	2.2	2.2	2.2	2.1	2.1	2.2	2.2	2.1	2.2	2.1	2.1	2.1	2.2	2.1	2.2	2.2	2.1	2.2	2.2	2.2	2.2	2.2
2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.1	2.2	2.1	2.2	2.1	2.1	2.1	2.1	2.2	2.1	2.1	2.2	2.1	2.1	2.1	2.1	2.1	2.1	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2	2.2
2.0	2.0	1.9	1.9	1.9	1.9	1.9	1.8	1.9	2.0	2.0	2.0	2.0	2.0	2.0	1.9	2.0	2.0	2.0	2.2	2.0	2.1	2.0	2.0	2.0	2.0	2.1	2.0	2.1	2.2	2.1	2.1	2.1	2.0	2.0	2.0
1.8	1.7	1.7	1.8	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.7	1.8	1.7	1.7	1.7	1.7	1.8	1.6	1.8	1.8	1.7	1.7	1.7	1.8	1.8	1.8	1.8	1.8	1.9	1.9	1.8	1.7	1.8
1.6	1.5	1.5	1.5	1.5	1.5	1.4	1.4	1.4	1.4	1.4	1.3	1.3	1.5	1.6	1.6	1.5	1.4	1.5	1.4	1.4	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.6
1.5	1.3	1.4	1.4	1.5	1.4	1.3	1.3	1.2	1.1	1.1	1.2	1.3	1.4	1.4	1.3	1.2	1.1	1.2	1.2	1.2	1.2	1.3	1.3	1.3	1.2	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.4	1.6
1.0	1.0	1.2	1.2	1.1	1.0	.9	.9	.8	.8	.8	.9	.9	.9	1.0	1.0	.9	.9	.9	.8	.8	.7	.7	.7	.8	.8	.6	.6	.7	.6	.7	.7	.7	.7	.9	1.0
.6	.6	.6	.6	.6	.6	.6	.7	.8	.9	1.0	1.0	1.1	1.1	1.1	.9	.8	.6	.6	.6	.6	.6	.6	.6	.6	.5	.5	.5	.6	.6	.6	.6	.6	.5	.5	.5
.7	.7	.7	.7	.7	.8	.8	.9	1.0	1.0	1.1	1.1	1.0	1.0	.9	.8	.8	.7	.7	.7	.7	.8	.8	.8	.9	.9	.9	.9	.9	.8	.8	.8	.8	.8	.7	.7

Figure 34. ATOVS MEAN O-B brightness temperature differences (deg C). JANUARY 2006
Channel: AMSUA-5 (700 hPa)
NOAA15, using all observations



-.1	.1	.0	-.1	-.1	.0	-.1	-.3	-.2	-.1	.0	-.1	-.3	-.6	-.3	.0	-.1	-.3	-.1	-.1	.0	.0	.0	.0	.0	.1	.1	.0	.0	.0	-.1	-.1	-.1	-.1	-.1	-.1
.1	.2	.3	.2	.2	.2	.0	-.1	-.1	.0	.4	.3	-.8	-3.2	-3.1	-.2	-.1	.2	.3	.2	.2	.3	.3	.2	.2	.2	.1	-.1	-.1	.1	.1	.1	.0	.2	.2	.2
.3	.2	.4	.6	.6	.5	.2	.2	.2	.3	.3	.3	.3	-.3	.1	.2	.2	.3	.2	.1	.0	.0	.2	.4	.2	.2	.3	.3	.0	-.1	.1	.2	.2	.1	.2	.4
.4	.3	.3	.3	.1	.3	.4	.4	.4	.3	.2	.3	.3	.4	.3	.3	.3	.1	.2	.1	.2	.2	.3	.3	.4	.4	.3	.4	.4	.5	.2	.5	.2	.1	.3	.4
.4	.3	.3	.3	.3	.1	.1	.4	.1	.0	.1	.1	.2	.3	.3	.2	.2	.2	.2	.1	.4	.2	.3	.0	.1	.4	1.1	1.3	.9	.7	.5	.4	.2	.2	.3	.4
.2	.1	.2	.2	.2	.1	.3	.4	.1	.1	.1	.1	.1	.2	.2	.2	.2	.3	.3	.1	.1	.2	.3	.4	.4	-.3	-.2	.7	1.0	.4	.2	.1	.2	.2	.2	.1
.1	.1	.1	.1	.1	.0	.0	.3	.0	.0	.0	.1	.1	.1	.2	.2	.2	.5	.7	.6	.5	.4	.5	.2	.2	.1	.1	-.1	.5	.2	.1	.1	.1	.2	.1	.0
.1	.1	.0	.0	.0	-.1	-.2	-.1	.0	-.1	-.1	.0	.0	.0	.0	.0	.1	.2	.3	.5	.4	.4	.4	.0	.0	.0	-.1	-.1	.0	.0	-.2	.0	.0	.0	.0	.0
-.1	-.1	-.1	-.1	-.2	-.1	.0	.0	.0	-.1	-.3	-.2	-.3	-.2	-.2	-.2	-.1	-.1	.0	.1	.0	.4	.3	.0	-.1	-.2	-.3	-.3	-.2	-.3	-.4	-.3	-.4	-.3	-.3	-.2
-.2	-.1	-.1	-.1	-.1	.0	.0	.1	.0	-.1	-.3	-.4	-.4	-.2	.1	.0	.0	.0	-.1	-.2	-.5	-.1	-.1	-.2	-.2	-.2	-.3	-.3	-.4	-.5	-.4	-.6	-.7	-.4	-.4	-.3
-.4	-.4	-.3	-.2	-.1	.0	.0	.1	.1	.0	-.2	-.6	-.4	.0	.0	.0	.0	.0	.0	.0	-.5	-.3	-.3	-.2	-.1	.0	.0	.0	.0	-.2	-.6	-.5	-.5	-.3	-.3	-.4
-.1	-.2	-.2	-.1	.0	.0	.0	.0	.1	.1	.0	-.2	-.2	-.1	-.1	.0	.0	.1	.1	.0	-.2	-.1	-.1	-.1	.0	.0	.1	.1	.1	.1	-.1	.4	.3	.0	-.1	-.1
.0	.0	.1	.0	.1	.1	.1	.1	.1	.1	.1	.3	-.1	.0	-.1	.0	.1	.1	.2	.2	.1	.0	.0	.0	.1	.1	.1	.1	.1	.1	.0	.1	.3	.1	.1	.0
.1	.1	.2	.2	.2	.2	.2	.2	.2	.2	.1	.3	.2	.2	.2	.2	.2	.2	.3	.3	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.1	.1
.2	.2	.2	.3	.3	.3	.3	.3	.2	.2	.2	.2	.2	.3	.3	.3	.3	.3	.2	.2	.2	.3	.3	.3	.3	.3	.3	.2	.3	.3	.3	.3	.3	.3	.3	.2
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.2	.1	.1	.2	.3	.2	.3	.2	.2	.2	.2	.2	.1	-.1	.1	.2	.1	.0	.0	.1	.0	.0	.1	.1	.2	.3
-.6	-.5	-.3	-.1	-.3	-.4	-.3	-.2	-.1	.0	-.1	-.1	-.1	.0	-.1	-.3	-.5	-1.4	-2.4	-2.7	-2.4	-2.0	-2.3	-2.4	-1.5	-1.7	-2.3	-2.9	-2.6	-2.4	-2.2	-1.7	-1.2	-1.1	-.4	-.5
-.2	-.2	-.3	-.1	-.1	-.3	-.5	-.7	-.6	-.1	.0	-.1	-.2	-.3	-.4	-.6	-1.0	-1.5	-1.7	-1.8	-2.1	-2.5	-2.9	-3.4	-3.7	-3.6	-3.6	-3.4	-3.2	-2.8	-2.6	-2.5	-2.2	-1.0	-.5	-.4

Figure 35. ATOVS SD O-B brightness temperature differences (deg C). JANUARY 2006
Channel: AMSUA-5 (700 hPa)
NOAA15, using all observations

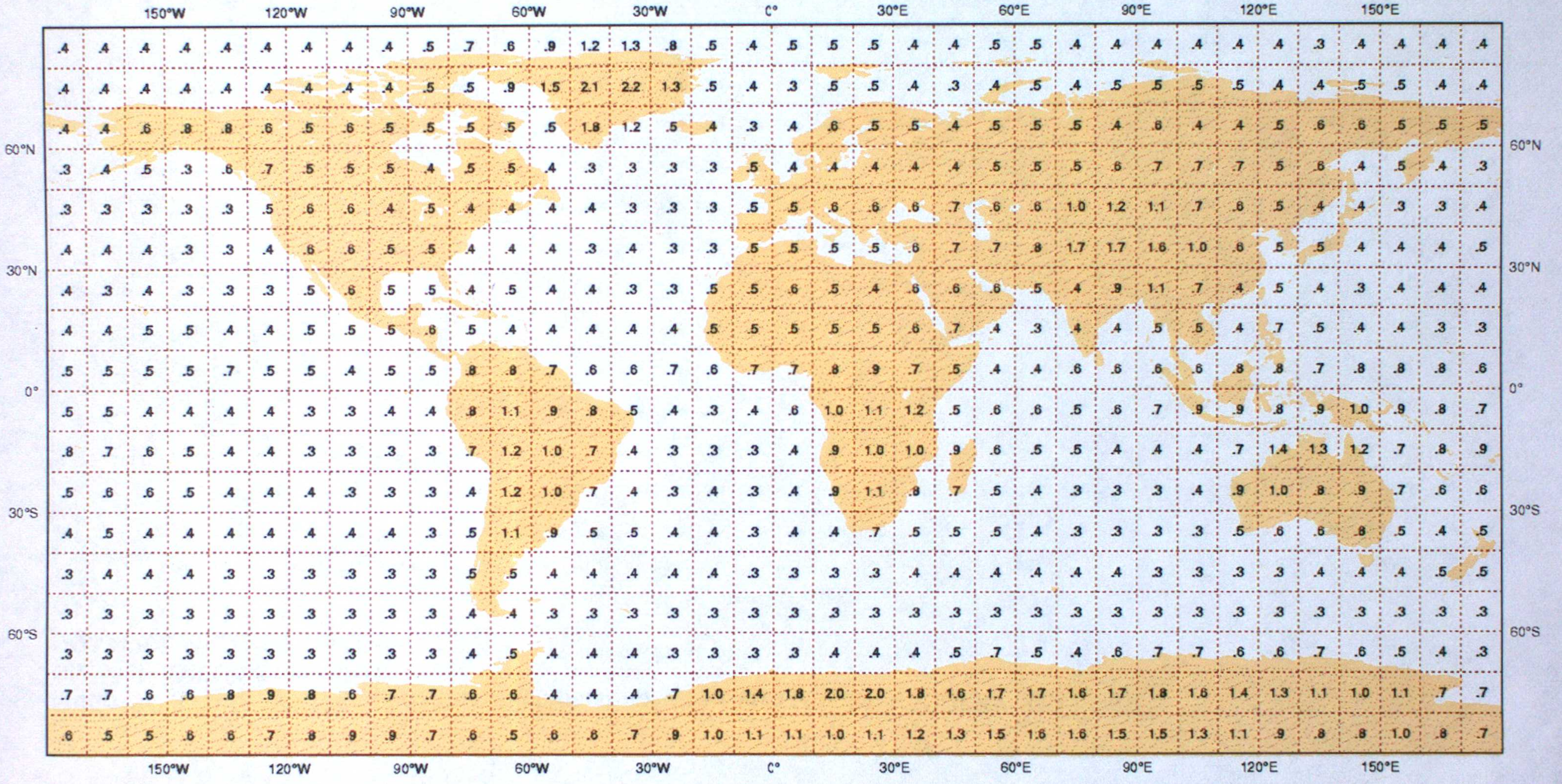
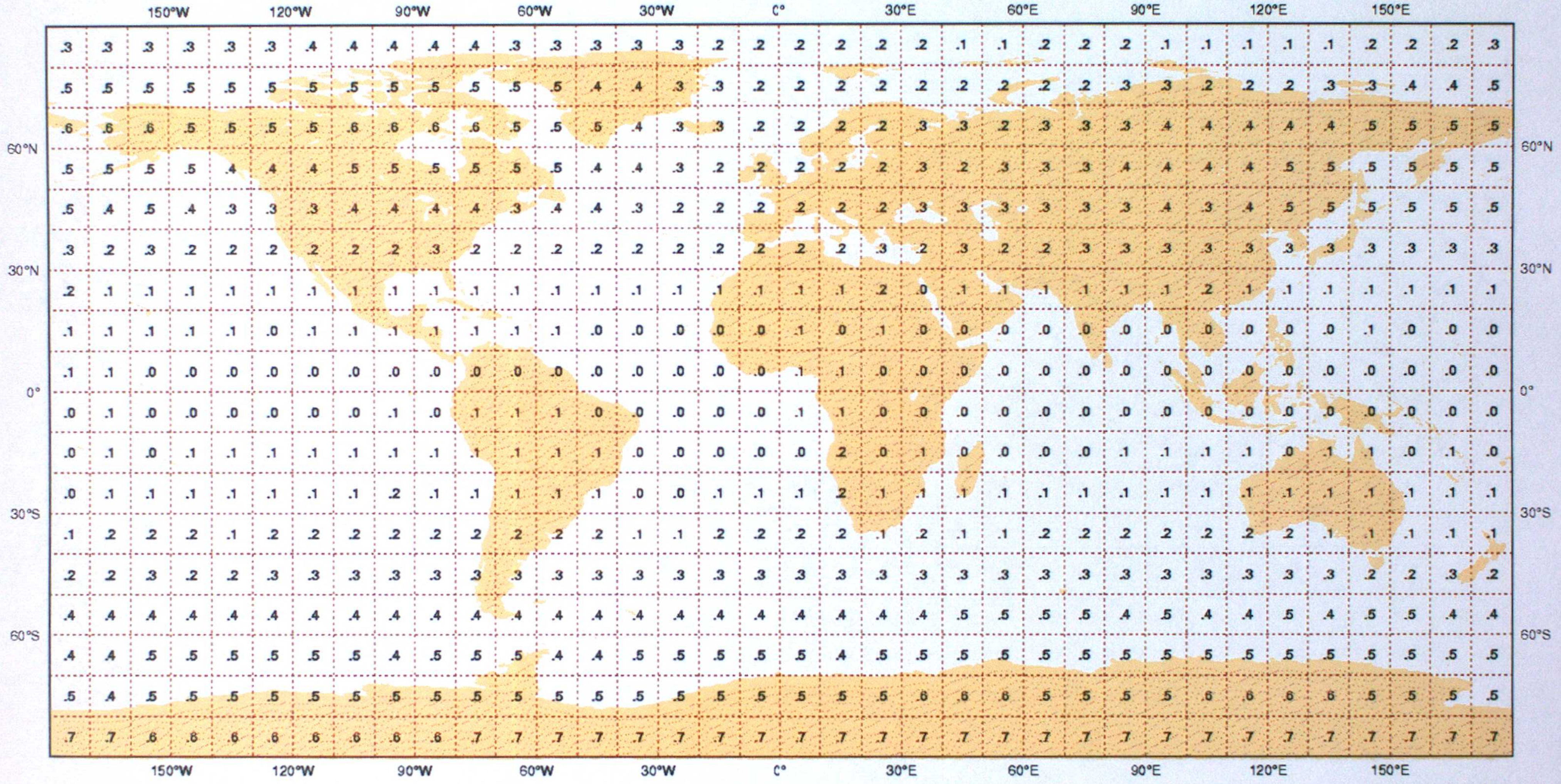
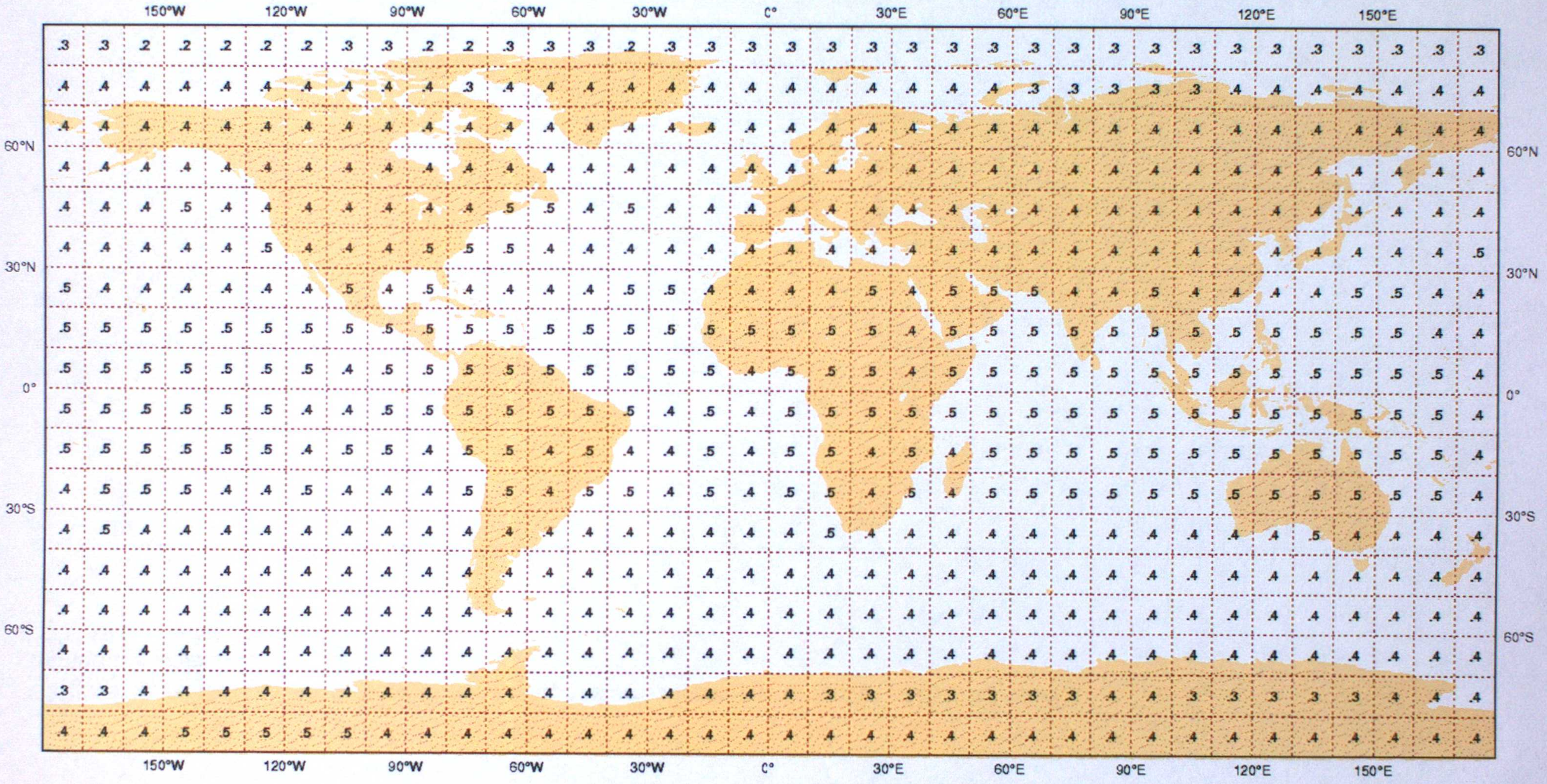

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
.4 .4 .4 .4 .4 .4 .4 .4 .4 .5 .7 .6 .9 1.2 1.3 .8 .5 .4 .5 .5 .5 .4 .4 .5 .5 .4 .4 .4 .4 .4 .4 .3 .4 .4 .4 .4
.4 .4 .4 .4 .4 .4 .4 .4 .4 .5 .5 .9 1.5 2.1 2.2 1.3 .5 .4 .3 .5 .5 .4 .3 .4 .5 .4 .5 .5 .5 .5 .4 .4 .5 .5 .4 .4
.4 .4 .6 .8 .8 .6 .5 .6 .5 .5 .5 .5 .5 1.8 1.2 .5 .4 .3 .4 .6 .5 .5 .4 .5 .5 .5 .4 .6 .4 .4 .5 .6 .6 .5 .5 .5
.3 .4 .5 .3 .6 .7 .5 .5 .5 .4 .5 .5 .4 .3 .3 .3 .3 .5 .4 .4 .4 .4 .4 .5 .5 .5 .6 .7 .7 .7 .5 .6 .4 .5 .4 .3
.3 .3 .3 .3 .3 .5 .6 .6 .4 .5 .4 .4 .4 .4 .3 .3 .3 .5 .5 .6 .6 .6 .7 .6 .6 1.0 1.2 1.1 .7 .6 .5 .4 .4 .3 .3 .4
.4 .4 .4 .3 .3 .4 .6 .6 .5 .5 .4 .4 .4 .3 .4 .3 .3 .5 .5 .5 .5 .6 .7 .7 .8 1.7 1.7 1.6 1.0 .6 .5 .5 .4 .4 .4 .5
.4 .3 .4 .3 .3 .3 .5 .6 .5 .5 .4 .5 .4 .4 .3 .3 .5 .5 .6 .5 .4 .6 .6 .6 .5 .4 .9 1.1 .7 .4 .5 .4 .3 .4 .4 .4
.4 .4 .5 .5 .4 .4 .5 .5 .5 .6 .5 .4 .4 .4 .4 .4 .5 .5 .5 .5 .5 .6 .7 .4 .3 .4 .4 .5 .5 .4 .7 .5 .4 .4 .3 .3
.5 .5 .5 .5 .7 .5 .5 .4 .5 .5 .8 .8 .7 .6 .6 .7 .6 .7 .7 .8 .9 .7 .5 .4 .4 .6 .6 .6 .6 .8 .8 .7 .8 .8 .8 .6
.5 .5 .4 .4 .4 .4 .3 .3 .4 .4 .8 1.1 .9 .8 .5 .4 .3 .4 .6 1.0 1.1 1.2 .5 .6 .6 .5 .6 .7 .9 .9 .8 .9 1.0 .9 .8 .7
.8 .7 .6 .5 .4 .4 .3 .3 .3 .3 .7 1.2 1.0 .7 .4 .3 .3 .3 .4 .9 1.0 1.0 .9 .6 .5 .5 .4 .4 .4 .7 1.4 1.3 1.2 .7 .8 .9
.5 .6 .6 .5 .4 .4 .4 .3 .3 .3 .4 1.2 1.0 .7 .4 .3 .4 .3 .4 .9 1.1 .8 .7 .5 .4 .3 .3 .3 .4 .9 1.0 .8 .9 .7 .6 .6
.4 .5 .4 .4 .4 .4 .4 .4 .4 .3 .5 1.1 .9 .5 .5 .4 .4 .3 .4 .4 .7 .5 .5 .5 .4 .3 .3 .3 .3 .5 .6 .6 .8 .5 .4 .5
.3 .4 .4 .4 .3 .3 .3 .3 .3 .3 .5 .5 .4 .4 .4 .4 .3 .3 .3 .3 .4 .4 .4 .4 .4 .4 .3 .3 .3 .3 .4 .4 .4 .5 .5
.3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .4 .4 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3
.3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .4 .5 .4 .4 .4 .3 .3 .3 .3 .4 .4 .4 .5 .7 .5 .4 .6 .7 .7 .6 .6 .7 .6 .5 .4 .3
.7 .7 .6 .6 .8 .9 .8 .6 .7 .7 .6 .6 .4 .4 .4 .7 1.0 1.4 1.8 2.0 2.0 1.8 1.6 1.7 1.7 1.6 1.7 1.8 1.6 1.4 1.3 1.1 1.0 1.1 .7 .7
.6 .5 .5 .6 .6 .7 .8 .9 .9 .7 .6 .5 .6 .6 .7 .9 1.0 1.1 1.1 1.0 1.1 1.2 1.3 1.5 1.6 1.6 1.5 1.5 1.3 1.1 .9 .8 .8 1.0 .8 .7

Figure 36. ATOVS MEAN O-B brightness temperature differences (deg C). JANUARY 2006
Channel: AMSUA-7 (300 hPa)
NOAA15, using all observations



.3	.3	.3	.3	.3	.3	.4	.4	.4	.4	.4	.3	.3	.3	.3	.3	.2	.2	.2	.2	.2	.2	.1	.1	.2	.2	.2	.1	.1	.1	.1	.1	.2	.2	.2	.3
.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.4	.4	.3	.3	.2	.2	.2	.2	.2	.2	.2	.2	.2	.3	.3	.2	.2	.2	.3	.3	.4	.4	.5
.6	.6	.6	.5	.5	.5	.5	.6	.6	.6	.6	.5	.5	.5	.4	.3	.3	.2	.2	.2	.2	.3	.3	.2	.3	.3	.3	.4	.4	.4	.4	.4	.5	.5	.5	.5
.5	.5	.5	.5	.4	.4	.4	.5	.5	.5	.5	.5	.5	.4	.4	.3	.2	.2	.2	.2	.2	.3	.2	.3	.3	.3	.4	.4	.4	.4	.5	.5	.5	.5	.5	.5
.5	.4	.5	.4	.3	.3	.3	.4	.4	.4	.4	.3	.4	.4	.3	.2	.2	.2	.2	.2	.2	.3	.3	.3	.3	.3	.3	.4	.3	.4	.5	.5	.5	.5	.5	.5
.3	.2	.3	.2	.2	.2	.2	.2	.2	.3	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.3	.2	.3	.2	.2	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.2	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.2	.0	.1	.1	.1	.1	.1	.1	.2	.1	.1	.1	.1	.1	.1	.1
.1	.1	.1	.1	.1	.0	.1	.1	.1	.1	.1	.1	.1	.0	.0	.0	.0	.0	.1	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0
.1	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
.0	.1	.0	.0	.0	.0	.0	.0	.1	.0	.1	.1	.1	.0	.0	.0	.0	.0	.1	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0
.0	.1	.0	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.0	.0	.0	.0	.0	.2	.0	.1	.0	.0	.0	.0	.1	.1	.1	.1	.0	.1	.1	.0	.1	.0
.0	.1	.1	.1	.1	.1	.1	.1	.2	.1	.1	.1	.1	.1	.0	.0	.1	.1	.1	.2	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
.1	.2	.2	.2	.1	.2	.2	.2	.2	.2	.2	.2	.2	.2	.1	.1	.2	.2	.2	.2	.1	.2	.1	.1	.2	.2	.2	.2	.2	.2	.2	.1	.1	.1	.1	.1
.2	.2	.3	.2	.2	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.2	.2	.3	.2
.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.5	.5	.5	.5	.4	.5	.4	.4	.5	.4	.5	.5	.4	.4
.4	.4	.5	.5	.5	.5	.5	.5	.4	.5	.5	.5	.4	.4	.5	.5	.5	.5	.5	.4	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
.5	.4	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.6	.6	.6	.5	.5	.5	.5	.6	.6	.6	.6	.5	.5	.5	.5
.7	.7	.6	.6	.6	.6	.6	.6	.6	.6	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7	.7

Figure 37. ATOVS SD O-B brightness temperature differences (deg C). JANUARY 2006
Channel: AMSUA-7 (300 hPa)
NOAA15, using all observations



.3	.3	.2	.2	.2	.2	.2	.3	.3	.2	.2	.3	.3	.3	.2	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3	.3	.3	.4	.4	.4	.4	.4	.4	.4
.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4
.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4
.4	.4	.4	.5	.4	.4	.4	.4	.4	.4	.4	.5	.5	.4	.5	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4
.4	.4	.4	.4	.4	.5	.4	.4	.4	.5	.5	.5	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.5
.5	.4	.4	.4	.4	.4	.4	.5	.4	.5	.4	.4	.4	.4	.5	.5	.4	.4	.4	.4	.5	.4	.5	.5	.5	.4	.4	.5	.4	.4	.4	.4	.5	.5	.4	.4
.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.4	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.4	.4
.5	.5	.5	.5	.5	.5	.5	.4	.5	.5	.5	.5	.5	.5	.5	.5	.5	.4	.5	.5	.5	.4	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.4
.5	.5	.5	.5	.5	.5	.4	.4	.5	.5	.5	.5	.5	.5	.5	.4	.5	.4	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.4
.5	.5	.5	.5	.5	.5	.4	.5	.5	.4	.5	.5	.4	.5	.4	.4	.5	.4	.5	.5	.4	.5	.4	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.4
.4	.5	.5	.5	.4	.4	.5	.4	.4	.4	.5	.5	.4	.5	.5	.4	.5	.4	.5	.5	.4	.5	.4	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5	.4
.4	.5	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.5	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.5	.4	.4	.4	.4
.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4
.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4
.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4
.3	.3	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3	.3	.3	.3	.3	.4	.4	.3	.3	.3	.3	.3	.4	.4	.4
.4	.4	.4	.5	.5	.5	.5	.5	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4

Figure 38. ATOVS MEAN O-B brightness temperature differences (deg C). JANUARY 2006
Channel: AMSUA-9 (100 hPa)
NOAA15, using all observations

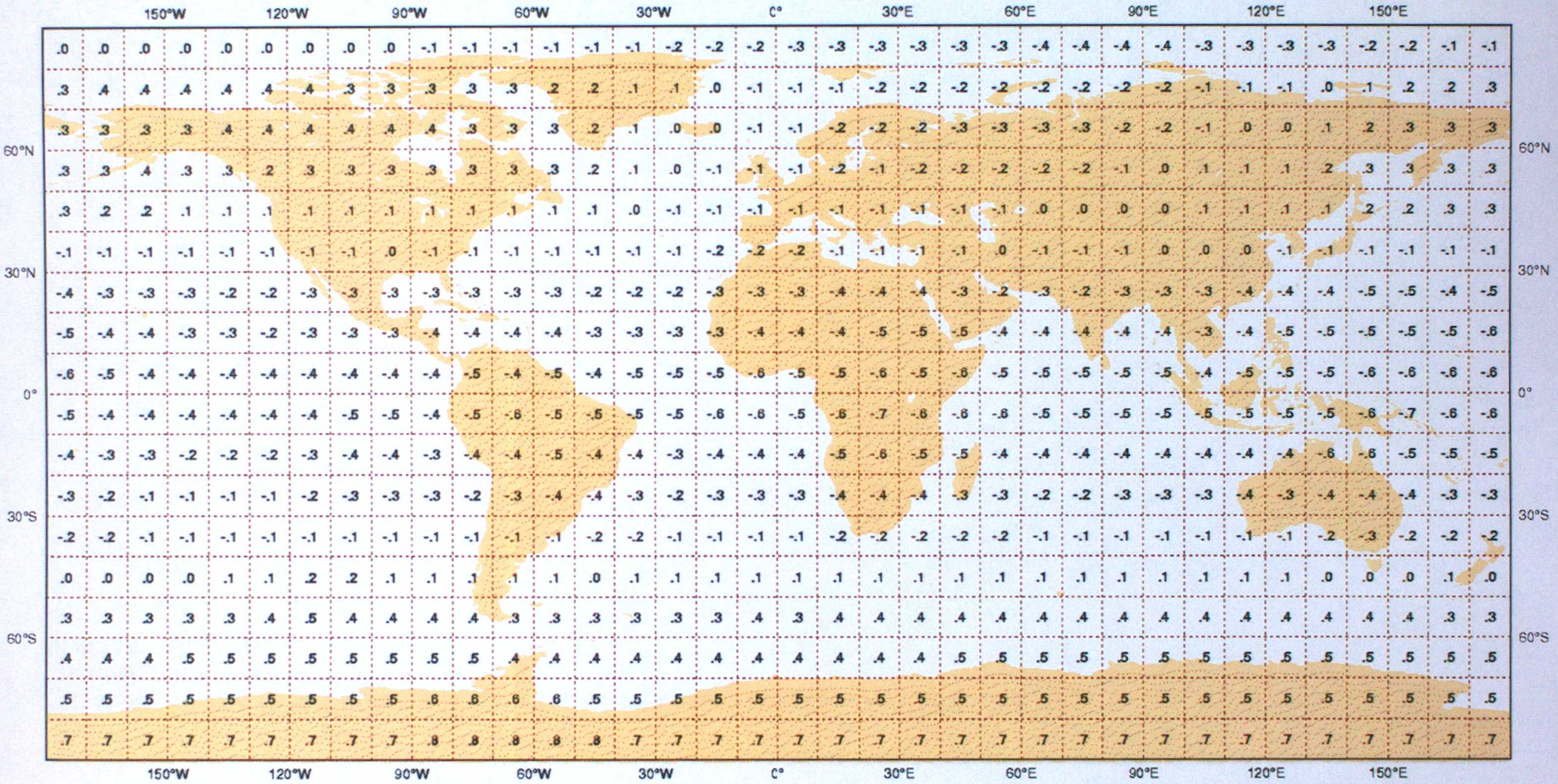

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
.0 .0 .0 .0 .0 .0 .0 .0 .0 -.1 -.1 -.1 -.1 -.1 -.1 -.2 -.2 -.2 -.3 -.3 -.3 -.3 -.3 -.3 -.4 -.4 -.4 -.4 -.3 -.3 -.3 -.3 -.2 -.2 -.1 -.1
.3 .4 .4 .4 .4 .4 .4 .3 .3 .3 .3 .3 .2 .2 .1 .1 .0 -.1 -.1 -.1 -.2 -.2 -.2 -.2 -.2 -.2 -.2 -.2 -.1 -.1 -.1 .0 .1 .2 .2 .3
.3 .3 .3 .3 .4 .4 .4 .4 .4 .4 .3 .3 .3 .2 .1 .0 .0 -.1 -.1 -.2 -.2 -.2 -.3 -.3 -.3 -.3 -.2 -.2 -.1 .0 .0 .1 .2 .3 .3 .3
.3 .3 .4 .3 .3 .2 .3 .3 .3 .3 .3 .3 .3 .2 .1 .0 -.1 -.1 -.1 -.2 -.1 -.2 -.2 -.2 -.2 -.2 -.1 .0 .1 .1 .1 .2 .3 .3 .3 .3
.3 .2 .2 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .0 -.1 -.1 -.1 -.1 -.1 -.1 -.1 -.1 -.1 .0 .0 .0 .0 .1 .1 .1 .1 .2 .2 .3 .3
-.1 -.1 -.1 -.1 -.1 -.1 -.1 -.1 .0 -.1 -.1 -.1 -.1 -.1 -.1 -.1 -.2 -.2 -.2 -.1 -.1 -.1 -.1 .0 -.1 -.1 -.1 .0 .0 .0 -.1 -.1 -.1 -.1 -.1 -.1
-.4 -.3 -.3 -.3 -.2 -.2 -.3 -.3 -.3 -.3 -.3 -.3 -.3 -.2 -.2 -.2 -.3 -.3 -.3 -.4 -.4 -.4 -.3 -.2 -.3 -.2 -.3 -.3 -.3 -.4 -.4 -.4 -.5 -.5 -.4 -.5
-.5 -.4 -.4 -.3 -.3 -.2 -.3 -.3 -.3 -.4 -.4 -.4 -.4 -.3 -.3 -.3 -.3 -.4 -.4 -.4 -.5 -.5 -.5 -.4 -.4 -.4 -.4 -.4 -.3 -.4 -.5 -.5 -.5 -.5 -.5 -.6
-.6 -.5 -.4 -.4 -.4 -.4 -.4 -.4 -.4 -.4 -.5 -.4 -.5 -.4 -.5 -.5 -.5 -.6 -.5 -.5 -.6 -.5 -.6 -.5 -.5 -.5 -.5 -.5 -.4 -.5 -.5 -.5 -.6 -.6 -.6 -.6
-.5 -.4 -.4 -.4 -.4 -.4 -.4 -.5 -.5 -.4 -.5 -.6 -.5 -.5 -.5 -.5 -.6 -.6 -.5 -.6 -.7 -.6 -.6 -.6 -.5 -.5 -.5 -.5 -.5 -.5 -.5 -.5 -.6 -.7 -.6 -.6
-.4 -.3 -.3 -.2 -.2 -.2 -.3 -.4 -.4 -.3 -.4 -.4 -.5 -.4 -.4 -.3 -.4 -.4 -.4 -.5 -.6 -.5 -.5 -.4 -.4 -.4 -.4 -.4 -.4 -.4 -.4 -.6 -.6 -.5 -.5 -.5
-.3 -.2 -.1 -.1 -.1 -.1 -.2 -.3 -.3 -.3 -.2 -.3 -.4 -.4 -.3 -.2 -.3 -.3 -.3 -.4 -.4 -.4 -.3 -.3 -.2 -.2 -.3 -.3 -.3 -.4 -.3 -.4 -.4 -.4 -.3 -.3
-.2 -.2 -.1 -.1 -.1 -.1 -.1 -.1 -.1 -.1 -.1 -.1 -.1 -.2 -.2 -.1 -.1 -.1 -.1 -.2 -.2 -.2 -.2 -.2 -.1 -.1 -.1 -.1 -.1 -.1 -.1 -.2 -.3 -.2 -.2 -.2
.0 .0 .0 .0 .1 .1 .2 .2 .1 .1 .1 .1 .1 .0 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .0 .0 .0 .1 .0
.3 .3 .3 .3 .3 .4 .5 .4 .4 .4 .4 .3 .3 .3 .3 .3 .3 .4 .3 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .3 .3
.4 .4 .4 .5 .5 .5 .5 .5 .5 .5 .5 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5
.5 .5 .5 .5 .5 .5 .5 .5 .5 .6 .6 .6 .6 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5
.7 .7 .7 .7 .7 .7 .7 .7 .7 .8 .8 .8 .8 .8 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7

Figure 39. ATOVS SD O-B brightness temperature differences (deg C). JANUARY 2006
Channel: AMSUA-9 (100 hPa)
NOAA15, using all observations

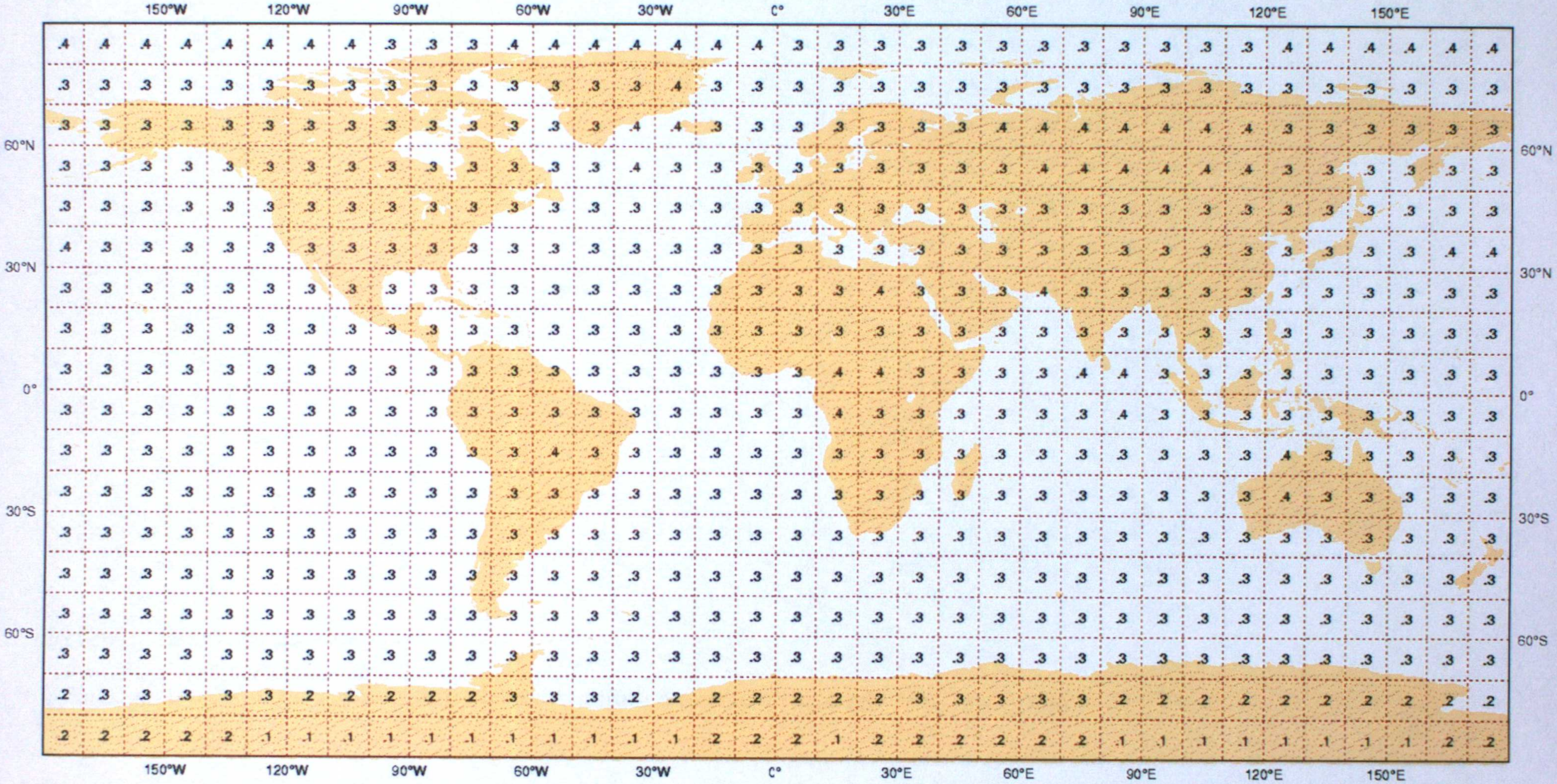
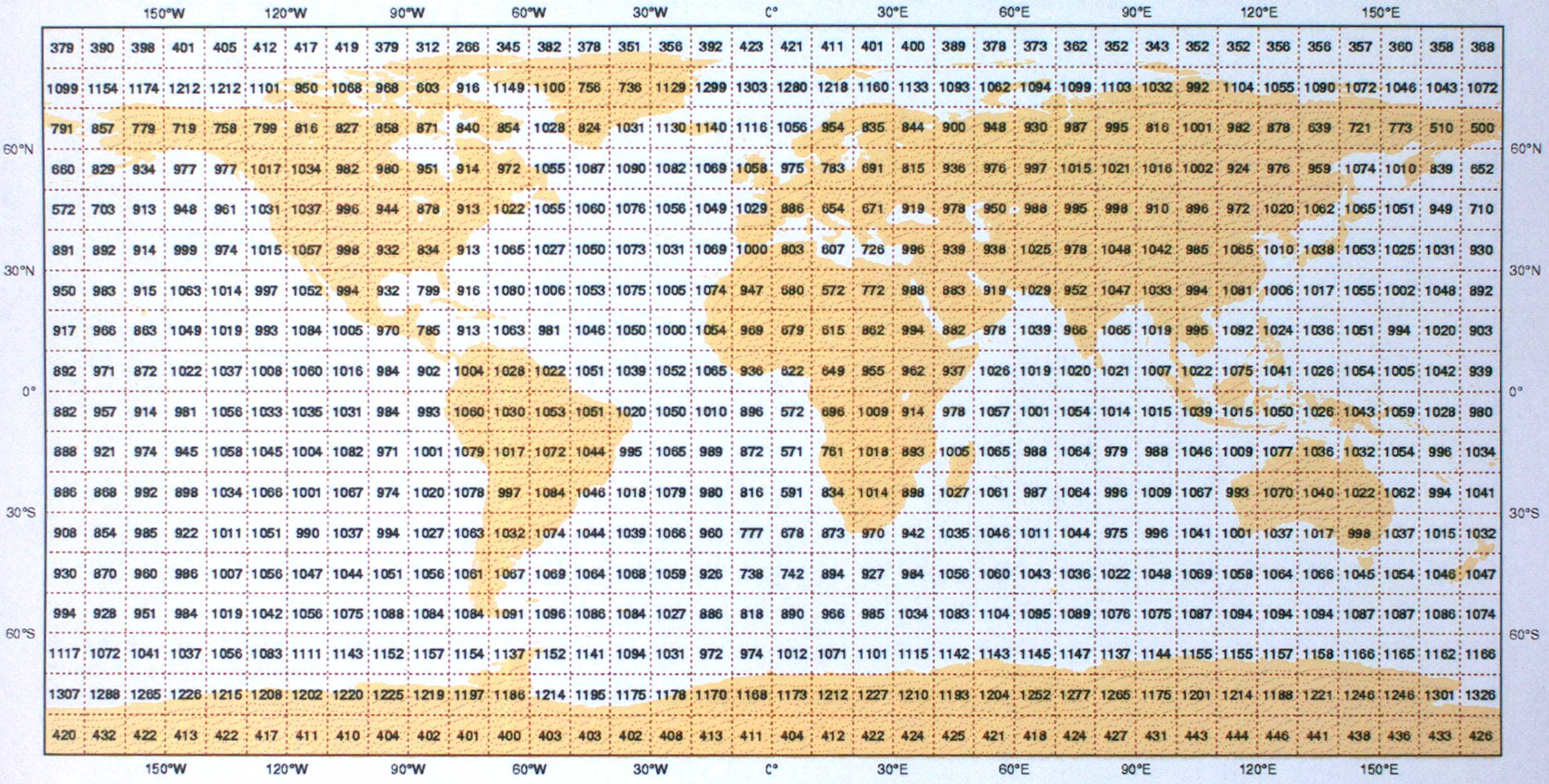
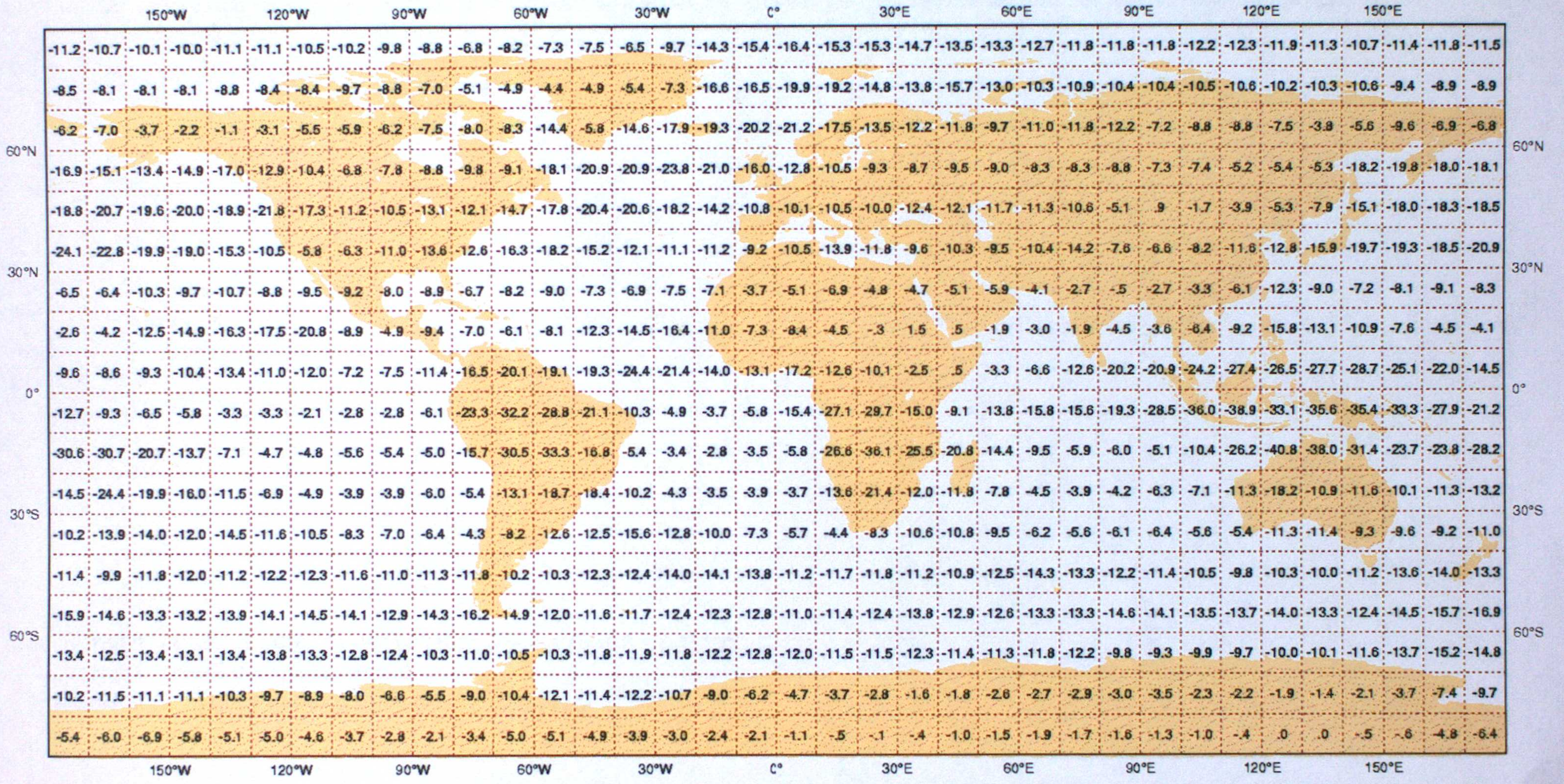

150°W 120°W 90°W 60°W 30°W C° 30°E 60°E 90°E 120°E 150°E
60°N 30°N 0° 30°S 60°S
.4 .4 .4 .4 .4 .4 .4 .4 .3 .3 .3 .4 .4 .4 .4 .4 .4 .4 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .4 .4 .4 .4 .4 .4
.3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .4 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3
.3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .4 .4 .3 .3 .3 .3 .3 .3 .3 .4 .4 .4 .4 .4 .4 .4 .3 .3 .3 .3 .3 .3
.3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .4 .3 .3 .3 .3 .3 .3 .3 .3 .3 .4 .4 .4 .4 .4 .4 .3 .3 .3 .3 .3 .3
.3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3
.4 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .4 .4
.3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .4 .3 .3 .3 .4 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3
.3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3
.3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .4 .4 .3 .3 .3 .3 .4 .4 .3 .3 .3 .3 .3 .3 .3 .3 .3
.3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .4 .3 .3 .3 .3 .3 .3 .4 .3 .3 .3 .3 .3 .3 .3 .3 .3
.3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .4 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .4 .3 .3 .3 .3 .3
.3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .4 .3 .3 .3 .3 .3
.3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3
.3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3
.3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3
.3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3
.2 .3 .3 .3 .3 .3 .2 .2 .2 .2 .2 .3 .3 .3 .2 .2 .2 .2 .2 .2 .2 .3 .3 .3 .3 .3 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2
.2 .2 .2 .2 .2 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .2 .2 .2 .1 .2 .2 .2 .2 .2 .2 .1 .1 .1 .1 .1 .1 .1 .1 .2 .2

Figure 40. ATOVS mean daily count. JANUARY 2006
NOAA16, using all observations
Global average number of observations in 24 hours = 607302



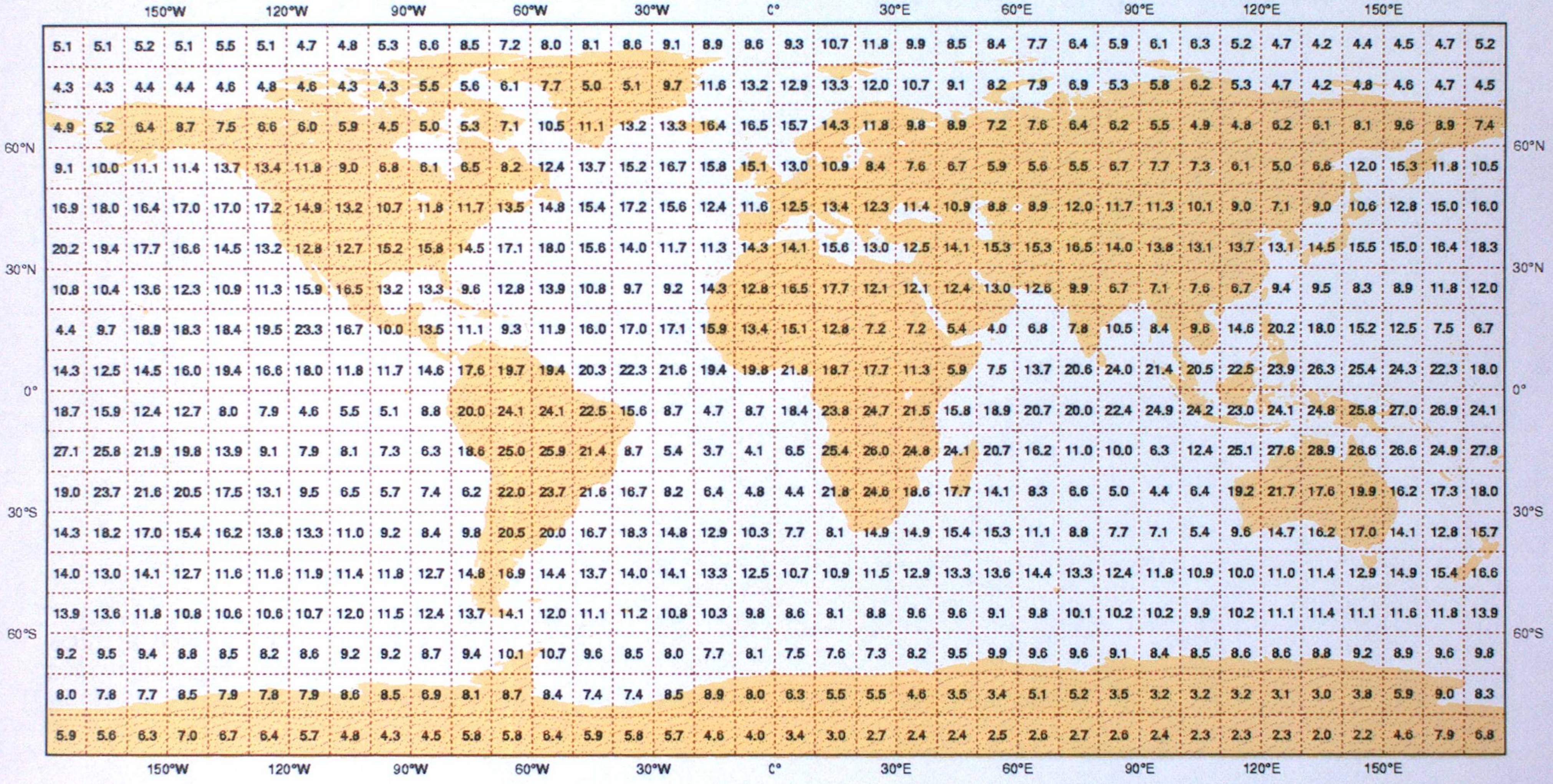
379	390	398	401	405	412	417	419	379	312	266	345	382	378	351	356	392	423	421	411	401	400	389	378	373	362	352	343	352	352	356	356	357	360	358	368
1099	1154	1174	1212	1212	1101	950	1068	968	603	916	1149	1100	756	736	1129	1299	1303	1280	1218	1160	1133	1093	1062	1094	1099	1103	1032	992	1104	1055	1090	1072	1046	1043	1072
791	857	779	719	758	799	816	827	858	871	840	854	1028	824	1031	1130	1140	1116	1056	954	835	844	900	948	930	987	995	816	1001	982	878	639	721	773	510	500
660	829	934	977	977	1017	1034	982	980	951	914	972	1055	1087	1090	1082	1069	1058	975	783	691	815	936	976	997	1015	1021	1016	1002	924	976	959	1074	1010	839	652
572	703	913	948	961	1031	1037	996	944	878	913	1022	1055	1060	1076	1056	1049	1029	886	654	671	919	978	950	988	995	998	910	896	972	1020	1062	1065	1051	949	710
891	892	914	999	974	1015	1057	998	932	834	913	1065	1027	1050	1073	1031	1069	1000	803	607	726	996	939	938	1025	978	1048	1042	985	1065	1010	1038	1053	1025	1031	930
950	983	915	1063	1014	997	1052	994	932	799	916	1080	1006	1053	1075	1005	1074	947	680	572	772	988	883	919	1029	952	1047	1033	994	1081	1006	1017	1055	1002	1048	892
917	966	863	1049	1019	993	1084	1005	970	785	913	1063	981	1046	1050	1000	1054	969	679	615	862	994	882	978	1039	966	1065	1019	995	1092	1024	1036	1051	994	1020	903
892	971	872	1022	1037	1008	1060	1016	984	902	1004	1028	1022	1051	1039	1052	1065	936	622	649	955	962	937	1026	1019	1020	1021	1007	1022	1075	1041	1026	1054	1005	1042	939
882	957	914	981	1056	1033	1035	1031	984	993	1060	1030	1053	1051	1020	1050	1010	896	572	696	1009	914	978	1057	1001	1054	1014	1015	1039	1015	1050	1026	1043	1059	1028	980
888	921	974	945	1058	1045	1004	1082	971	1001	1079	1017	1072	1044	995	1065	989	872	571	761	1018	893	1005	1065	988	1064	979	988	1046	1009	1077	1036	1032	1054	996	1034
886	868	992	898	1034	1066	1001	1067	974	1020	1078	997	1084	1046	1018	1079	980	816	591	834	1014	898	1027	1061	987	1064	996	1009	1067	993	1070	1040	1022	1062	994	1041
908	854	985	922	1011	1051	990	1037	994	1027	1063	1032	1074	1044	1039	1066	960	777	678	873	970	942	1035	1046	1011	1044	975	996	1041	1001	1037	1017	998	1037	1015	1032
930	870	960	986	1007	1056	1047	1044	1051	1056	1061	1067	1069	1064	1068	1059	926	738	742	894	927	984	1056	1060	1043	1036	1022	1048	1069	1058	1064	1066	1045	1054	1046	1047
994	928	951	984	1019	1042	1056	1075	1088	1084	1084	1091	1096	1086	1084	1027	886	818	890	966	985	1034	1083	1104	1095	1089	1076	1075	1087	1094	1094	1094	1087	1087	1086	1074
1117	1072	1041	1037	1056	1083	1111	1143	1152	1157	1154	1137	1152	1141	1094	1031	972	974	1012	1071	1101	1115	1142	1143	1145	1147	1137	1144	1155	1155	1157	1158	1166	1165	1162	1166
1307	1288	1265	1226	1215	1208	1202	1220	1225	1219	1197	1186	1214	1195	1175	1178	1170	1168	1173	1212	1227	1210	1193	1204	1252	1277	1265	1175	1201	1214	1188	1221	1246	1246	1301	1326
420	432	422	413	422	417	411	410	404	402	401	400	403	403	402	408	413	411	404	412	422	424	425	421	418	424	427	431	443	444	446	441	438	436	433	426

Figure 41. ATOVS MEAN O-B brightness temperature differences (deg C). JANUARY 2006
Channel: HIRS8 (Surface)
NOAA16, using all observations



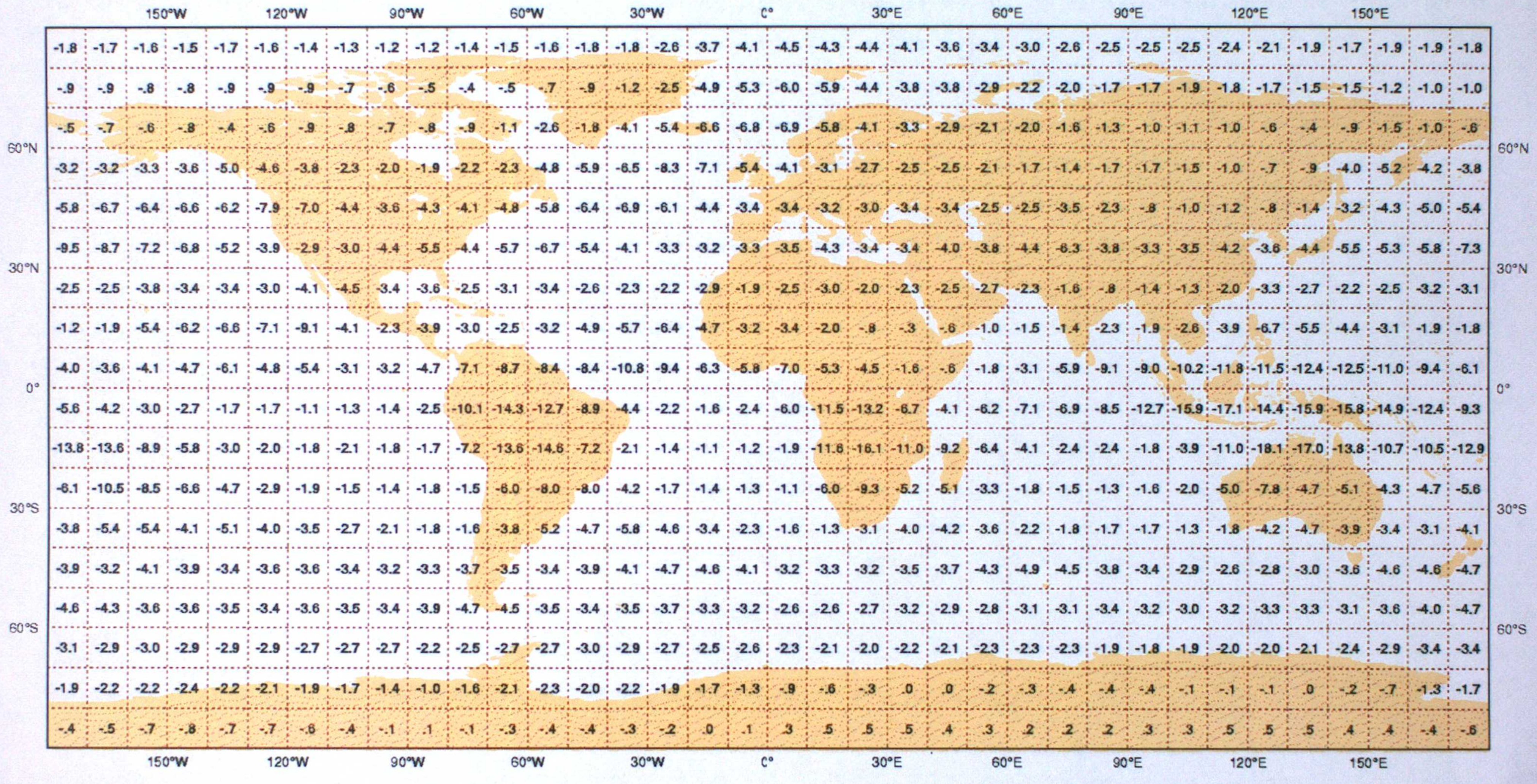
-11.2	-10.7	-10.1	-10.0	-11.1	-11.1	-10.5	-10.2	-9.8	-8.8	-6.8	-8.2	-7.3	-7.5	-6.5	-9.7	-14.3	-15.4	-16.4	-15.3	-15.3	-14.7	-13.5	-13.3	-12.7	-11.8	-11.8	-11.8	-12.2	-12.3	-11.9	-11.3	-10.7	-11.4	-11.8	-11.5
-8.5	-8.1	-8.1	-8.1	-8.8	-8.4	-8.4	-9.7	-8.8	-7.0	-5.1	-4.9	-4.4	-4.9	-5.4	-7.3	-16.6	-16.5	-19.9	-19.2	-14.8	-13.8	-15.7	-13.0	-10.3	-10.9	-10.4	-10.4	-10.5	-10.6	-10.2	-10.3	-10.6	-9.4	-8.9	-8.9
-6.2	-7.0	-3.7	-2.2	-1.1	-3.1	-5.5	-5.9	-6.2	-7.5	-8.0	-8.3	-14.4	-5.8	-14.6	-17.9	-19.3	-20.2	-21.2	-17.5	-13.5	-12.2	-11.8	-9.7	-11.0	-11.8	-12.2	-7.2	-8.8	-8.8	-7.5	-3.8	-5.6	-9.6	-6.9	-6.8
-16.9	-15.1	-13.4	-14.9	-17.0	-12.9	-10.4	-6.8	-7.8	-8.8	-9.8	-9.1	-18.1	-20.9	-20.9	-23.8	-21.0	-16.0	-12.8	-10.5	-9.3	-8.7	-9.5	-9.0	-8.3	-8.3	-8.8	-7.3	-7.4	-5.2	-5.4	-5.3	-18.2	-19.8	-18.0	-18.1
-18.8	-20.7	-19.6	-20.0	-18.9	-21.8	-17.3	-11.2	-10.5	-13.1	-12.1	-14.7	-17.8	-20.4	-20.6	-18.2	-14.2	-10.8	-10.1	-10.5	-10.0	-12.4	-12.1	-11.7	-11.3	-10.6	-5.1	.9	-1.7	-3.9	-5.3	-7.9	-15.1	-18.0	-18.3	-18.5
-24.1	-22.8	-19.9	-19.0	-15.3	-10.5	-5.8	-6.3	-11.0	-13.6	-12.6	-16.3	-18.2	-15.2	-12.1	-11.1	-11.2	-9.2	-10.5	-13.9	-11.8	-9.6	-10.3	-9.5	-10.4	-14.2	-7.6	-6.6	-8.2	-11.6	-12.8	-15.9	-19.7	-19.3	-18.5	-20.9
-6.5	-6.4	-10.3	-9.7	-10.7	-8.8	-9.5	-9.2	-8.0	-8.9	-6.7	-8.2	-9.0	-7.3	-6.9	-7.5	-7.1	-3.7	-5.1	-6.9	-4.8	-4.7	-5.1	-5.9	-4.1	-2.7	-.5	-2.7	-3.3	-6.1	-12.3	-9.0	-7.2	-8.1	-9.1	-8.3
-2.6	-4.2	-12.5	-14.9	-16.3	-17.5	-20.8	-8.9	-4.9	-9.4	-7.0	-6.1	-8.1	-12.3	-14.5	-16.4	-11.0	-7.3	-8.4	-4.5	-.3	1.5	.5	-1.9	-3.0	-1.9	-4.5	-3.6	-6.4	-9.2	-15.8	-13.1	-10.9	-7.6	-4.5	-4.1
-9.6	-8.6	-9.3	-10.4	-13.4	-11.0	-12.0	-7.2	-7.5	-11.4	-16.5	-20.1	-19.1	-19.3	-24.4	-21.4	-14.0	-13.1	-17.2	-12.6	-10.1	-2.5	.5	-3.3	-6.6	-12.6	-20.2	-20.9	-24.2	-27.4	-26.5	-27.7	-28.7	-25.1	-22.0	-14.5
-12.7	-9.3	-6.5	-5.8	-3.3	-3.3	-2.1	-2.8	-2.8	-6.1	-23.3	-32.2	-28.8	-21.1	-10.3	-4.9	-3.7	-5.8	-15.4	-27.1	-29.7	-15.0	-9.1	-13.8	-15.8	-15.6	-19.3	-28.5	-36.0	-38.9	-33.1	-35.6	-35.4	-33.3	-27.9	-21.2
-30.6	-30.7	-20.7	-13.7	-7.1	-4.7	-4.8	-5.6	-5.4	-5.0	-15.7	-30.5	-33.3	-16.8	-5.4	-3.4	-2.8	-3.5	-5.8	-26.6	-36.1	-25.5	-20.8	-14.4	-9.5	-5.9	-6.0	-5.1	-10.4	-26.2	-40.8	-38.0	-31.4	-23.7	-23.8	-28.2
-14.5	-24.4	-19.9	-16.0	-11.5	-6.9	-4.9	-3.9	-3.9	-6.0	-5.4	-13.1	-18.7	-18.4	-10.2	-4.3	-3.5	-3.9	-3.7	-13.6	-21.4	-12.0	-11.8	-7.8	-4.5	-3.9	-4.2	-6.3	-7.1	-11.3	-18.2	-10.9	-11.6	-10.1	-11.3	-13.2
-10.2	-13.9	-14.0	-12.0	-14.5	-11.6	-10.5	-8.3	-7.0	-6.4	-4.3	-8.2	-12.6	-12.5	-15.6	-12.8	-10.0	-7.3	-5.7	-4.4	-8.3	-10.6	-10.8	-9.5	-6.2	-5.6	-6.1	-6.4	-5.6	-5.4	-11.3	-11.4	-9.3	-9.6	-9.2	-11.0
-11.4	-9.9	-11.8	-12.0	-11.2	-12.2	-12.3	-11.6	-11.0	-11.3	-11.8	-10.2	-10.3	-12.3	-12.4	-14.0	-14.1	-13.8	-11.2	-11.7	-11.8	-11.2	-10.9	-12.5	-14.3	-13.3	-12.2	-11.4	-10.5	-9.8	-10.3	-10.0	-11.2	-13.6	-14.0	-13.3
-15.9	-14.6	-13.3	-13.2	-13.9	-14.1	-14.5	-14.1	-12.9	-14.3	-16.2	-14.9	-12.0	-11.6	-11.7	-12.4	-12.3	-12.8	-11.0	-11.4	-12.4	-13.8	-12.9	-12.6	-13.3	-13.3	-14.6	-14.1	-13.5	-13.7	-14.0	-13.3	-12.4	-14.5	-15.7	-16.9
-13.4	-12.5	-13.4	-13.1	-13.4	-13.8	-13.3	-12.8	-12.4	-10.3	-11.0	-10.5	-10.3	-11.8	-11.9	-11.8	-12.2	-12.8	-12.0	-11.5	-11.5	-12.3	-11.4	-11.3	-11.8	-12.2	-9.8	-9.3	-9.9	-9.7	-10.0	-10.1	-11.6	-13.7	-15.2	-14.8
-10.2	-11.5	-11.1	-11.1	-10.3	-9.7	-8.9	-8.0	-6.6	-5.5	-9.0	-10.4	-12.1	-11.4	-12.2	-10.7	-9.0	-6.2	-4.7	-3.7	-2.8	-1.6	-1.8	-2.6	-2.7	-2.9	-3.0	-3.5	-2.3	-2.2	-1.9	-1.4	-2.1	-3.7	-7.4	-9.7
-5.4	-6.0	-6.9	-5.8	-5.1	-5.0	-4.6	-3.7	-2.8	-2.1	-3.4	-5.0	-5.1	-4.9	-3.9	-3.0	-2.4	-2.1	-1.1	-.5	-.1	-.4	-1.0	-1.5	-1.9	-1.7	-1.6	-1.3	-1.0	-.4	.0	.0	-.5	-.6	-4.8	-6.4

Figure 42. ATOVS SD O-B brightness temperature differences (deg C). JANUARY 2006
Channel: HIRS8 (Surface)
NOAA16, using all observations



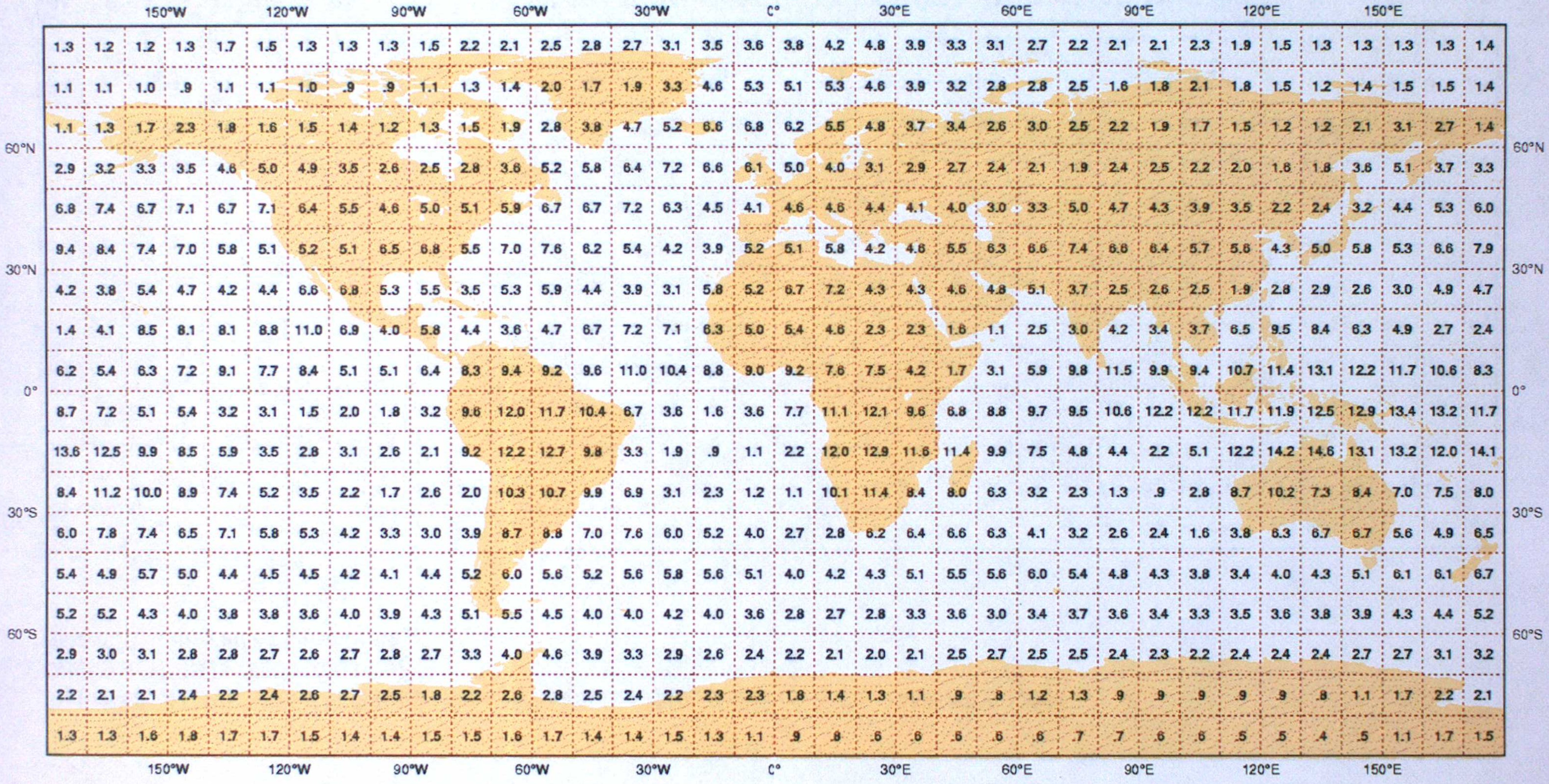
5.1	5.1	5.2	5.1	5.5	5.1	4.7	4.8	5.3	6.6	8.5	7.2	8.0	8.1	8.6	9.1	8.9	8.6	9.3	10.7	11.8	9.9	8.5	8.4	7.7	6.4	5.9	6.1	6.3	5.2	4.7	4.2	4.4	4.5	4.7	5.2
4.3	4.3	4.4	4.4	4.6	4.8	4.6	4.3	4.3	5.5	5.6	6.1	7.7	5.0	5.1	9.7	11.6	13.2	12.9	13.3	12.0	10.7	9.1	8.2	7.9	6.9	5.3	5.8	6.2	5.3	4.7	4.2	4.8	4.6	4.7	4.5
4.9	5.2	6.4	8.7	7.5	6.6	6.0	5.9	4.5	5.0	5.3	7.1	10.5	11.1	13.2	13.3	16.4	16.5	15.7	14.3	11.8	9.8	8.9	7.2	7.6	6.4	6.2	5.5	4.9	4.8	6.2	6.1	8.1	9.6	8.9	7.4
9.1	10.0	11.1	11.4	13.7	13.4	11.8	9.0	6.8	6.1	6.5	8.2	12.4	13.7	15.2	16.7	15.8	15.1	13.0	10.9	8.4	7.6	6.7	5.9	5.6	5.5	6.7	7.7	7.3	6.1	5.0	6.6	12.0	15.3	11.8	10.5
16.9	18.0	16.4	17.0	17.0	17.2	14.9	13.2	10.7	11.8	11.7	13.5	14.8	15.4	17.2	15.6	12.4	11.6	12.5	13.4	12.3	11.4	10.9	8.8	8.9	12.0	11.7	11.3	10.1	9.0	7.1	9.0	10.6	12.8	15.0	16.0
20.2	19.4	17.7	16.6	14.5	13.2	12.8	12.7	15.2	15.8	14.5	17.1	18.0	15.6	14.0	11.7	11.3	14.3	14.1	15.6	13.0	12.5	14.1	15.3	15.3	16.5	14.0	13.8	13.1	13.7	13.1	14.5	15.5	15.0	16.4	18.3
10.8	10.4	13.6	12.3	10.9	11.3	15.9	16.5	13.2	13.3	9.6	12.8	13.9	10.8	9.7	9.2	14.3	12.8	16.5	17.7	12.1	12.1	12.4	13.0	12.6	9.9	6.7	7.1	7.6	6.7	9.4	9.5	8.3	8.9	11.8	12.0
4.4	9.7	18.9	18.3	18.4	19.5	23.3	16.7	10.0	13.5	11.1	9.3	11.9	16.0	17.0	17.1	15.9	13.4	15.1	12.8	7.2	7.2	5.4	4.0	6.8	7.8	10.5	8.4	9.6	14.6	20.2	18.0	15.2	12.5	7.5	6.7
14.3	12.5	14.5	16.0	19.4	16.6	18.0	11.8	11.7	14.6	17.6	19.7	19.4	20.3	22.3	21.6	19.4	19.8	21.8	18.7	17.7	11.3	5.9	7.5	13.7	20.6	24.0	21.4	20.5	22.5	23.9	26.3	25.4	24.3	22.3	18.0
18.7	15.9	12.4	12.7	8.0	7.9	4.6	5.5	5.1	8.8	20.0	24.1	24.1	22.5	15.6	8.7	4.7	8.7	18.4	23.8	24.7	21.5	15.8	18.9	20.7	20.0	22.4	24.9	24.2	23.0	24.1	24.8	25.8	27.0	26.9	24.1
27.1	25.8	21.9	19.8	13.9	9.1	7.9	8.1	7.3	6.3	18.6	25.0	25.9	21.4	8.7	5.4	3.7	4.1	6.5	25.4	26.0	24.8	24.1	20.7	16.2	11.0	10.0	6.3	12.4	25.1	27.6	28.9	26.6	26.6	24.9	27.8
19.0	23.7	21.6	20.5	17.5	13.1	9.5	6.5	5.7	7.4	6.2	22.0	23.7	21.6	16.7	8.2	6.4	4.8	4.4	21.8	24.6	18.6	17.7	14.1	8.3	6.6	5.0	4.4	6.4	19.2	21.7	17.6	19.9	16.2	17.3	18.0
14.3	18.2	17.0	15.4	16.2	13.8	13.3	11.0	9.2	8.4	9.8	20.5	20.0	16.7	18.3	14.8	12.9	10.3	7.7	8.1	14.9	14.9	15.4	15.3	11.1	8.8	7.7	7.1	5.4	9.6	14.7	16.2	17.0	14.1	12.8	15.7
14.0	13.0	14.1	12.7	11.6	11.6	11.9	11.4	11.8	12.7	14.8	16.9	14.4	13.7	14.0	14.1	13.3	12.5	10.7	10.9	11.5	12.9	13.3	13.6	14.4	13.3	12.4	11.8	10.9	10.0	11.0	11.4	12.9	14.9	15.4	16.6
13.9	13.6	11.8	10.8	10.6	10.6	10.7	12.0	11.5	12.4	13.7	14.1	12.0	11.1	11.2	10.8	10.3	9.8	8.6	8.1	8.8	9.6	9.6	9.1	9.8	10.1	10.2	10.2	9.9	10.2	11.1	11.4	11.1	11.6	11.8	13.9
9.2	9.5	9.4	8.8	8.5	8.2	8.6	9.2	9.2	8.7	9.4	10.1	10.7	9.6	8.5	8.0	7.7	8.1	7.5	7.6	7.3	8.2	9.5	9.9	9.6	9.6	9.1	8.4	8.5	8.6	8.6	8.8	9.2	8.9	9.6	9.8
8.0	7.8	7.7	8.5	7.9	7.8	7.9	8.6	8.5	6.9	8.1	8.7	8.4	7.4	7.4	8.5	8.9	8.0	6.3	5.5	5.5	4.6	3.5	3.4	5.1	5.2	3.5	3.2	3.2	3.2	3.1	3.0	3.8	5.9	9.0	8.3
5.9	5.6	6.3	7.0	6.7	6.4	5.7	4.8	4.3	4.5	5.8	5.8	6.4	5.9	5.8	5.7	4.6	4.0	3.4	3.0	2.7	2.4	2.4	2.5	2.6	2.7	2.6	2.4	2.3	2.3	2.3	2.0	2.2	4.6	7.9	6.8

Figure 43. ATOVS MEAN O-B brightness temperature differences (deg C). JANUARY 2006
Channel: HIRS15 (700 hPa)
NOAA16, using all observations



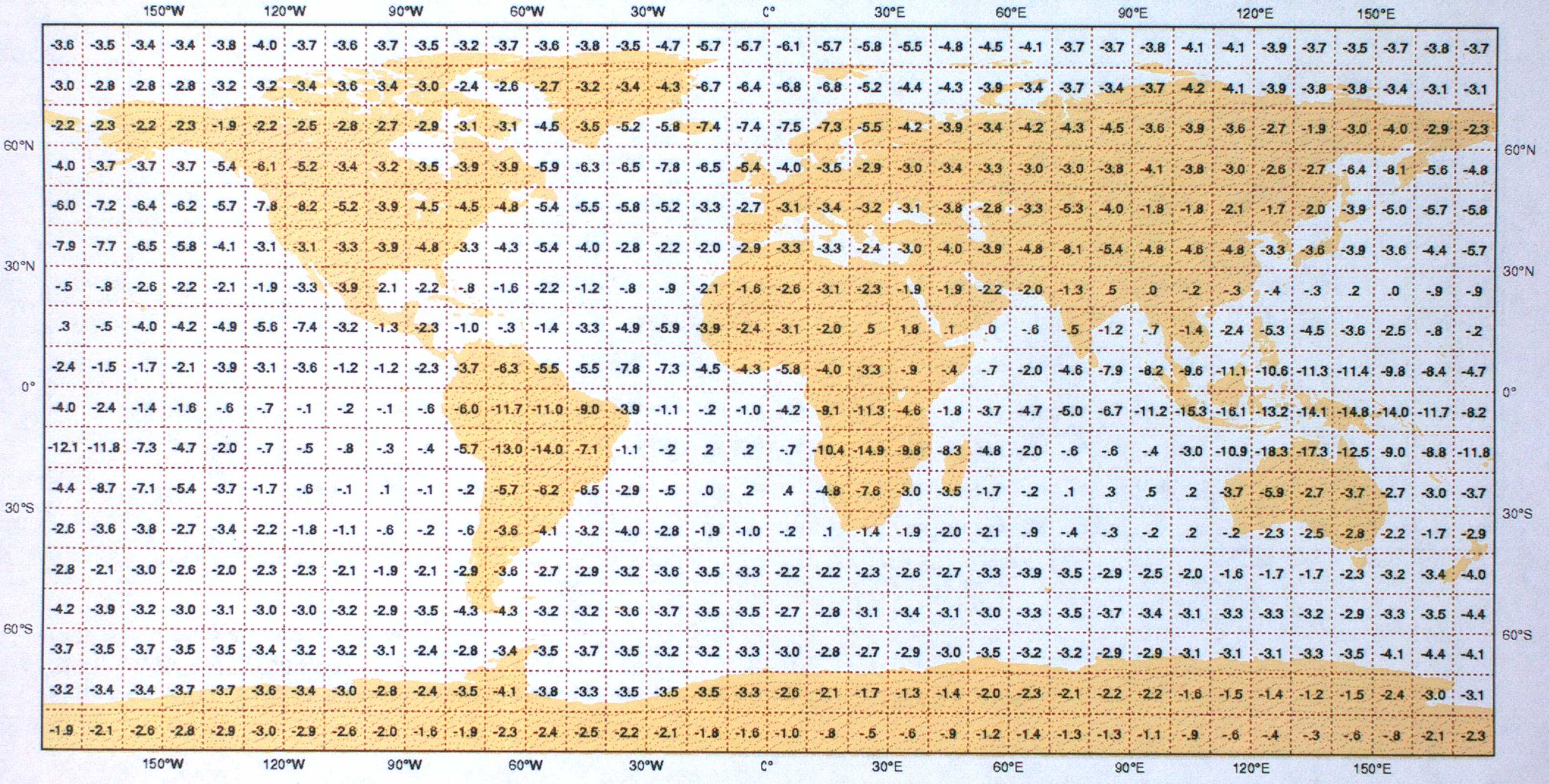
-1.8	-1.7	-1.6	-1.5	-1.7	-1.6	-1.4	-1.3	-1.2	-1.2	-1.4	-1.5	-1.6	-1.8	-1.8	-2.6	-3.7	-4.1	-4.5	-4.3	-4.4	-4.1	-3.6	-3.4	-3.0	-2.6	-2.5	-2.5	-2.5	-2.4	-2.1	-1.9	-1.7	-1.9	-1.9	-1.8
-.9	-.9	-.8	-.8	-.9	-.9	-.9	-.7	-.6	-.5	-.4	-.5	-.7	-.9	-1.2	-2.5	-4.9	-5.3	-6.0	-5.9	-4.4	-3.8	-3.8	-2.9	-2.2	-2.0	-1.7	-1.7	-1.9	-1.8	-1.7	-1.5	-1.5	-1.2	-1.0	-1.0
-.5	-.7	-.6	-.8	-.4	-.6	-.9	-.8	-.7	-.8	-.9	-1.1	-2.6	-1.8	-4.1	-5.4	-6.6	-6.8	-6.9	-5.8	-4.1	-3.3	-2.9	-2.1	-2.0	-1.6	-1.3	-1.0	-1.1	-1.0	-.6	-.4	-.9	-1.5	-1.0	-.6
-3.2	-3.2	-3.3	-3.6	-5.0	-4.6	-3.8	-2.3	-2.0	-1.9	-2.2	-2.3	-4.8	-5.9	-6.5	-8.3	-7.1	-5.4	-4.1	-3.1	-2.7	-2.5	-2.5	-2.1	-1.7	-1.4	-1.7	-1.7	-1.5	-1.0	-.7	-.9	-4.0	-5.2	-4.2	-3.8
-5.8	-6.7	-6.4	-6.6	-6.2	-7.9	-7.0	-4.4	-3.6	-4.3	-4.1	-4.8	-5.8	-6.4	-6.9	-6.1	-4.4	-3.4	-3.4	-3.2	-3.0	-3.4	-3.4	-2.5	-2.5	-3.5	-2.3	-.8	-1.0	-1.2	-.8	-1.4	-3.2	-4.3	-5.0	-5.4
-9.5	-8.7	-7.2	-6.8	-5.2	-3.9	-2.9	-3.0	-4.4	-5.5	-4.4	-5.7	-6.7	-5.4	-4.1	-3.3	-3.2	-3.3	-3.5	-4.3	-3.4	-3.4	-4.0	-3.8	-4.4	-6.3	-3.8	-3.3	-3.5	-4.2	-3.6	-4.4	-5.5	-5.3	-5.8	-7.3
-2.5	-2.5	-3.8	-3.4	-3.4	-3.0	-4.1	-4.5	-3.4	-3.6	-2.5	-3.1	-3.4	-2.6	-2.3	-2.2	-2.9	-1.9	-2.5	-3.0	-2.0	-2.3	-2.5	-2.7	-2.3	-1.6	-.8	-1.4	-1.3	-2.0	-3.3	-2.7	-2.2	-2.5	-3.2	-3.1
-1.2	-1.9	-5.4	-6.2	-6.6	-7.1	-9.1	-4.1	-2.3	-3.9	-3.0	-2.5	-3.2	-4.9	-5.7	-6.4	-4.7	-3.2	-3.4	-2.0	-.8	-.3	-.6	-1.0	-1.5	-1.4	-2.3	-1.9	-2.6	-3.9	-6.7	-5.5	-4.4	-3.1	-1.9	-1.8
-4.0	-3.6	-4.1	-4.7	-6.1	-4.8	-5.4	-3.1	-3.2	-4.7	-7.1	-8.7	-8.4	-8.4	-10.8	-9.4	-6.3	-5.8	-7.0	-5.3	-4.5	-1.6	-.6	-1.8	-3.1	-5.9	-9.1	-9.0	-10.2	-11.8	-11.5	-12.4	-12.5	-11.0	-9.4	-6.1
-5.6	-4.2	-3.0	-2.7	-1.7	-1.7	-1.1	-1.3	-1.4	-2.5	-10.1	-14.3	-12.7	-8.9	-4.4	-2.2	-1.6	-2.4	-6.0	-11.5	-13.2	-6.7	-4.1	-6.2	-7.1	-6.9	-8.5	-12.7	-15.9	-17.1	-14.4	-15.9	-15.8	-14.9	-12.4	-9.3
-13.8	-13.6	-8.9	-5.8	-3.0	-2.0	-1.8	-2.1	-1.8	-1.7	-7.2	-13.6	-14.6	-7.2	-2.1	-1.4	-1.1	-1.2	-1.9	-11.6	-16.1	-11.0	-9.2	-6.4	-4.1	-2.4	-2.4	-1.8	-3.9	-11.0	-18.1	-17.0	-13.8	-10.7	-10.5	-12.9
-6.1	-10.5	-8.5	-6.6	-4.7	-2.9	-1.9	-1.5	-1.4	-1.8	-1.5	-6.0	-8.0	-8.0	-4.2	-1.7	-1.4	-1.3	-1.1	-6.0	-9.3	-5.2	-5.1	-3.3	-1.8	-1.5	-1.3	-1.6	-2.0	-5.0	-7.8	-4.7	-5.1	-4.3	-4.7	-5.6
-3.8	-5.4	-5.4	-4.1	-5.1	-4.0	-3.5	-2.7	-2.1	-1.8	-1.6	-3.8	-5.2	-4.7	-5.8	-4.6	-3.4	-2.3	-1.6	-1.3	-3.1	-4.0	-4.2	-3.6	-2.2	-1.8	-1.7	-1.7	-1.3	-1.8	-4.2	-4.7	-3.9	-3.4	-3.1	-4.1
-3.9	-3.2	-4.1	-3.9	-3.4	-3.6	-3.6	-3.4	-3.2	-3.3	-3.7	-3.5	-3.4	-3.9	-4.1	-4.7	-4.6	-4.1	-3.2	-3.3	-3.2	-3.5	-3.7	-4.3	-4.9	-4.5	-3.8	-3.4	-2.9	-2.6	-2.8	-3.0	-3.6	-4.6	-4.6	-4.7
-4.6	-4.3	-3.6	-3.6	-3.5	-3.4	-3.6	-3.5	-3.4	-3.9	-4.7	-4.5	-3.5	-3.4	-3.5	-3.7	-3.3	-3.2	-2.6	-2.6	-2.7	-3.2	-2.9	-2.8	-3.1	-3.1	-3.4	-3.2	-3.0	-3.2	-3.3	-3.3	-3.1	-3.6	-4.0	-4.7
-3.1	-2.9	-3.0	-2.9	-2.9	-2.9	-2.7	-2.7	-2.7	-2.2	-2.5	-2.7	-2.7	-3.0	-2.9	-2.7	-2.5	-2.6	-2.3	-2.1	-2.0	-2.2	-2.1	-2.3	-2.3	-2.3	-1.9	-1.8	-1.9	-2.0	-2.0	-2.1	-2.4	-2.9	-3.4	-3.4
-1.9	-2.2	-2.2	-2.4	-2.2	-2.1	-1.9	-1.7	-1.4	-1.0	-1.6	-2.1	-2.3	-2.0	-2.2	-1.9	-1.7	-1.3	-.9	-.6	-.3	.0	.0	-.2	-.3	-.4	-.4	-.4	-.1	-.1	-.1	.0	-.2	-.7	-1.3	-1.7
-.4	-.5	-.7	-.8	-.7	-.7	-.6	-.4	-.1	.1	-.1	-.3	-.4	-.4	-.3	-.2	.0	.1	.3	.5	.5	.5	.4	.3	.2	.2	.2	.3	.3	.5	.5	.5	.4	.4	-.4	-.6

Figure 44. ATOVS SD O-B brightness temperature differences (deg C). JANUARY 2006
Channel: HIRS15 (700 hPa)
NOAA16, using all observations



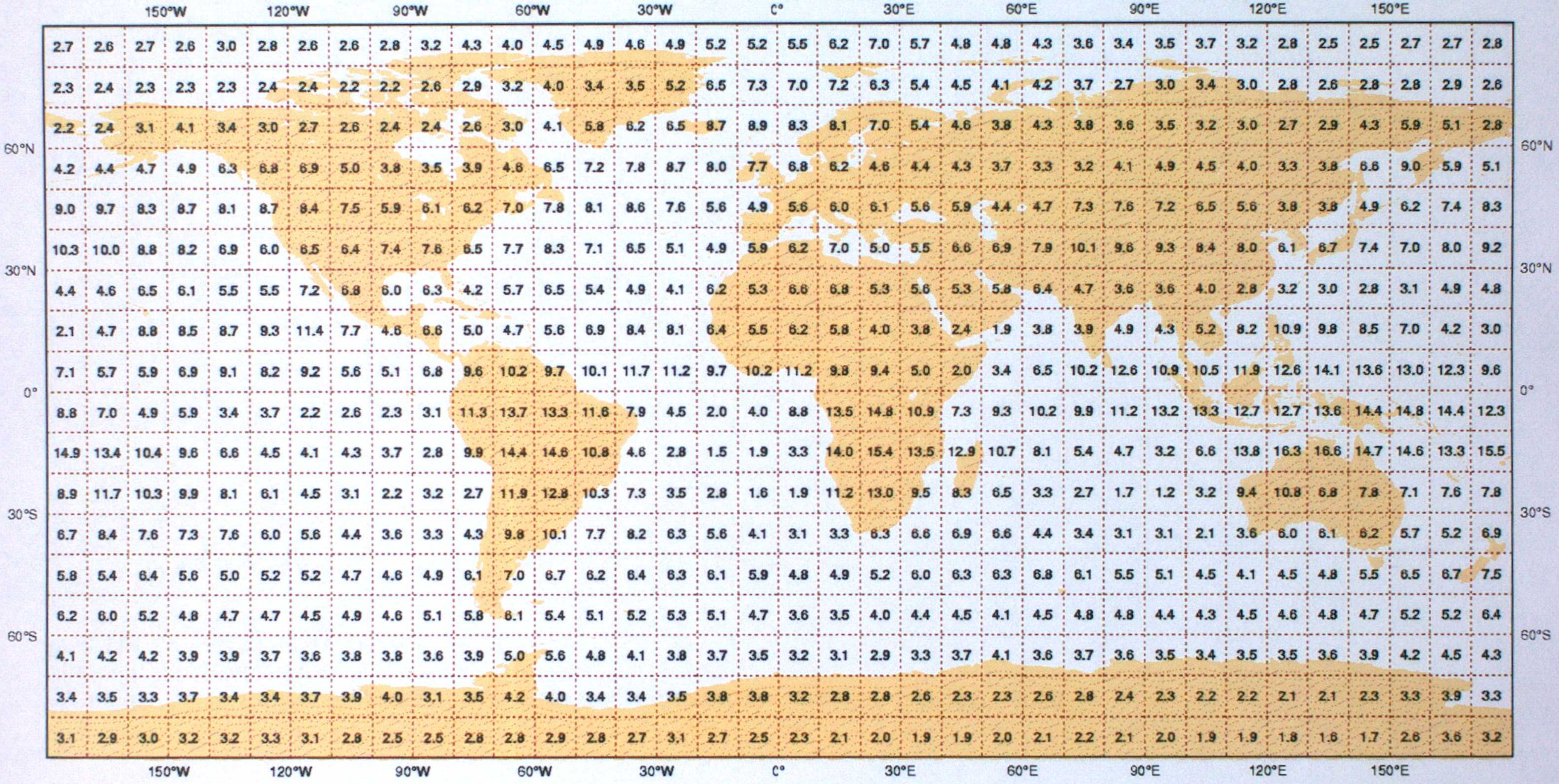
1.3	1.2	1.2	1.3	1.7	1.5	1.3	1.3	1.3	1.5	2.2	2.1	2.5	2.8	2.7	3.1	3.5	3.6	3.8	4.2	4.8	3.9	3.3	3.1	2.7	2.2	2.1	2.1	2.3	1.9	1.5	1.3	1.3	1.3	1.3	1.4
1.1	1.1	1.0	.9	1.1	1.1	1.0	.9	.9	1.1	1.3	1.4	2.0	1.7	1.9	3.3	4.6	5.3	5.1	5.3	4.6	3.9	3.2	2.8	2.8	2.5	1.6	1.8	2.1	1.8	1.5	1.2	1.4	1.5	1.5	1.4
1.1	1.3	1.7	2.3	1.8	1.6	1.5	1.4	1.2	1.3	1.5	1.9	2.8	3.8	4.7	5.2	6.6	6.8	6.2	5.5	4.8	3.7	3.4	2.6	3.0	2.5	2.2	1.9	1.7	1.5	1.2	1.2	2.1	3.1	2.7	1.4
2.9	3.2	3.3	3.5	4.6	5.0	4.9	3.5	2.6	2.5	2.8	3.6	5.2	5.8	6.4	7.2	6.6	6.1	5.0	4.0	3.1	2.9	2.7	2.4	2.1	1.9	2.4	2.5	2.2	2.0	1.8	1.8	3.6	5.1	3.7	3.3
6.8	7.4	6.7	7.1	6.7	7.1	6.4	5.5	4.6	5.0	5.1	5.9	6.7	6.7	7.2	6.3	4.5	4.1	4.6	4.6	4.4	4.1	4.0	3.0	3.3	5.0	4.7	4.3	3.9	3.5	2.2	2.4	3.2	4.4	5.3	6.0
9.4	8.4	7.4	7.0	5.8	5.1	5.2	5.1	6.5	6.8	5.5	7.0	7.6	6.2	5.4	4.2	3.9	5.2	5.1	5.8	4.2	4.6	5.5	6.3	6.6	7.4	6.6	6.4	5.7	5.6	4.3	5.0	5.8	5.3	6.6	7.9
4.2	3.8	5.4	4.7	4.2	4.4	6.6	6.8	5.3	5.5	3.5	5.3	5.9	4.4	3.9	3.1	5.8	5.2	6.7	7.2	4.3	4.3	4.6	4.8	5.1	3.7	2.5	2.6	2.5	1.9	2.8	2.9	2.6	3.0	4.9	4.7
1.4	4.1	8.5	8.1	8.1	8.8	11.0	6.9	4.0	5.8	4.4	3.6	4.7	6.7	7.2	7.1	6.3	5.0	5.4	4.6	2.3	2.3	1.6	1.1	2.5	3.0	4.2	3.4	3.7	6.5	9.5	8.4	6.3	4.9	2.7	2.4
6.2	5.4	6.3	7.2	9.1	7.7	8.4	5.1	5.1	6.4	8.3	9.4	9.2	9.6	11.0	10.4	8.8	9.0	9.2	7.6	7.5	4.2	1.7	3.1	5.9	9.8	11.5	9.9	9.4	10.7	11.4	13.1	12.2	11.7	10.6	8.3
8.7	7.2	5.1	5.4	3.2	3.1	1.5	2.0	1.8	3.2	9.6	12.0	11.7	10.4	6.7	3.6	1.6	3.6	7.7	11.1	12.1	9.6	6.8	8.8	9.7	9.5	10.6	12.2	12.2	11.7	11.9	12.5	12.9	13.4	13.2	11.7
13.6	12.5	9.9	8.5	5.9	3.5	2.8	3.1	2.6	2.1	9.2	12.2	12.7	9.8	3.3	1.9	.9	1.1	2.2	12.0	12.9	11.6	11.4	9.9	7.5	4.8	4.4	2.2	5.1	12.2	14.2	14.6	13.1	13.2	12.0	14.1
8.4	11.2	10.0	8.9	7.4	5.2	3.5	2.2	1.7	2.6	2.0	10.3	10.7	9.9	6.9	3.1	2.3	1.2	1.1	10.1	11.4	8.4	8.0	6.3	3.2	2.3	1.3	.9	2.8	8.7	10.2	7.3	8.4	7.0	7.5	8.0
6.0	7.8	7.4	6.5	7.1	5.8	5.3	4.2	3.3	3.0	3.9	8.7	8.8	7.0	7.6	6.0	5.2	4.0	2.7	2.8	6.2	6.4	6.6	6.3	4.1	3.2	2.6	2.4	1.6	3.8	6.3	6.7	6.7	5.6	4.9	6.5
5.4	4.9	5.7	5.0	4.4	4.5	4.5	4.2	4.1	4.4	5.2	6.0	5.6	5.2	5.6	5.8	5.6	5.1	4.0	4.2	4.3	5.1	5.5	5.6	6.0	5.4	4.8	4.3	3.8	3.4	4.0	4.3	5.1	6.1	6.1	6.7
5.2	5.2	4.3	4.0	3.8	3.8	3.6	4.0	3.9	4.3	5.1	5.5	4.5	4.0	4.0	4.2	4.0	3.6	2.8	2.7	2.8	3.3	3.6	3.0	3.4	3.7	3.6	3.4	3.3	3.5	3.6	3.8	3.9	4.3	4.4	5.2
2.9	3.0	3.1	2.8	2.8	2.7	2.6	2.7	2.8	2.7	3.3	4.0	4.6	3.9	3.3	2.9	2.6	2.4	2.2	2.1	2.0	2.1	2.5	2.7	2.5	2.5	2.4	2.3	2.2	2.4	2.4	2.4	2.7	2.7	3.1	3.2
2.2	2.1	2.1	2.4	2.2	2.4	2.6	2.7	2.5	1.8	2.2	2.6	2.8	2.5	2.4	2.2	2.3	2.3	1.8	1.4	1.3	1.1	.9	.8	1.2	1.3	.9	.9	.9	.9	.9	.8	1.1	1.7	2.2	2.1
1.3	1.3	1.6	1.8	1.7	1.7	1.5	1.4	1.4	1.5	1.5	1.6	1.7	1.4	1.4	1.5	1.3	1.1	.9	.8	.6	.6	.6	.6	.6	.7	.7	.6	.6	.5	.5	.4	.5	1.1	1.7	1.5

Figure 45. ATOVS MEAN O-B brightness temperature differences (deg C). JANUARY 2006
Channel: HIRS11 (500 - 700 hPa)
NOAA16, using all observations



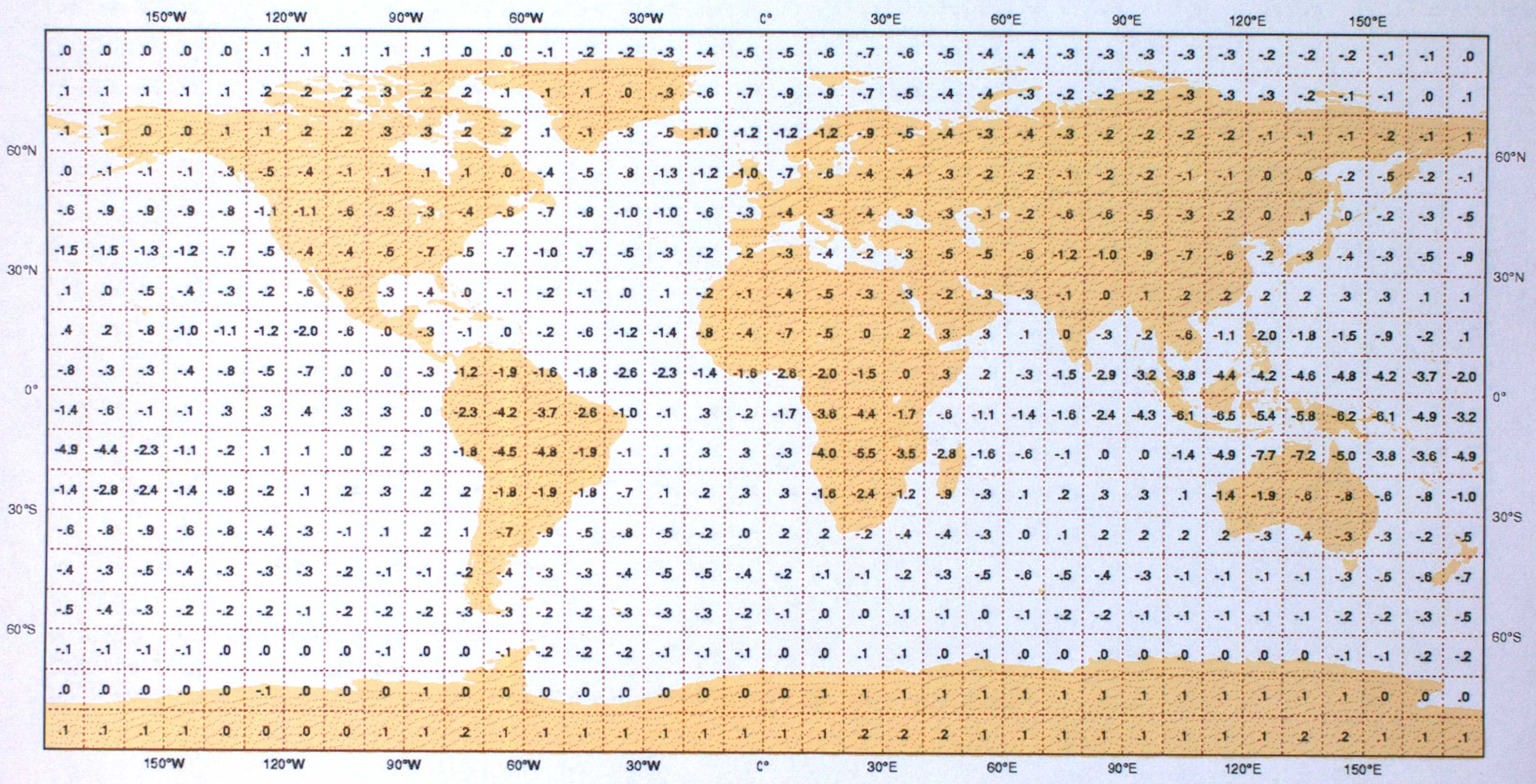
-3.6	-3.5	-3.4	-3.4	-3.8	-4.0	-3.7	-3.6	-3.7	-3.5	-3.2	-3.7	-3.6	-3.8	-3.5	-4.7	-5.7	-5.7	-6.1	-5.7	-5.8	-5.5	-4.8	-4.5	-4.1	-3.7	-3.7	-3.8	-4.1	-4.1	-3.9	-3.7	-3.5	-3.7	-3.8	-3.7
-3.0	-2.8	-2.8	-2.8	-3.2	-3.2	-3.4	-3.6	-3.4	-3.0	-2.4	-2.6	-2.7	-3.2	-3.4	-4.3	-6.7	-6.4	-6.8	-6.8	-5.2	-4.4	-4.3	-3.9	-3.4	-3.7	-3.4	-3.7	-4.2	-4.1	-3.9	-3.8	-3.8	-3.4	-3.1	-3.1
-2.2	-2.3	-2.2	-2.3	-1.9	-2.2	-2.5	-2.8	-2.7	-2.9	-3.1	-3.1	-4.5	-3.5	-5.2	-5.8	-7.4	-7.4	-7.5	-7.3	-5.5	-4.2	-3.9	-3.4	-4.2	-4.3	-4.5	-3.6	-3.9	-3.6	-2.7	-1.9	-3.0	-4.0	-2.9	-2.3
-4.0	-3.7	-3.7	-3.7	-5.4	-6.1	-5.2	-3.4	-3.2	-3.5	-3.9	-3.9	-5.9	-6.3	-6.5	-7.8	-6.5	-5.4	-4.0	-3.5	-2.9	-3.0	-3.4	-3.3	-3.0	-3.0	-3.8	-4.1	-3.8	-3.0	-2.6	-2.7	-6.4	-8.1	-5.6	-4.8
-6.0	-7.2	-6.4	-6.2	-5.7	-7.8	-8.2	-5.2	-3.9	-4.5	-4.5	-4.8	-5.4	-5.5	-5.8	-5.2	-3.3	-2.7	-3.1	-3.4	-3.2	-3.1	-3.8	-2.8	-3.3	-5.3	-4.0	-1.8	-1.8	-2.1	-1.7	-2.0	-3.9	-5.0	-5.7	-5.8
-7.9	-7.7	-6.5	-5.8	-4.1	-3.1	-3.1	-3.3	-3.9	-4.8	-3.3	-4.3	-5.4	-4.0	-2.8	-2.2	-2.0	-2.9	-3.3	-3.3	-2.4	-3.0	-4.0	-3.9	-4.8	-8.1	-5.4	-4.8	-4.6	-4.8	-3.3	-3.6	-3.9	-3.6	-4.4	-5.7
-.5	-.8	-2.6	-2.2	-2.1	-1.9	-3.3	-3.9	-2.1	-2.2	-.8	-1.6	-2.2	-1.2	-.8	-.9	-2.1	-1.6	-2.6	-3.1	-2.3	-1.9	-1.9	-2.2	-2.0	-1.3	.5	.0	-.2	-.3	-.4	-.3	.2	.0	-.9	-.9
.3	-.5	-4.0	-4.2	-4.9	-5.6	-7.4	-3.2	-1.3	-2.3	-1.0	-.3	-1.4	-3.3	-4.9	-5.9	-3.9	-2.4	-3.1	-2.0	.5	1.8	.1	.0	-.6	-.5	-1.2	-.7	-1.4	-2.4	-5.3	-4.5	-3.6	-2.5	-.8	-.2
-2.4	-1.5	-1.7	-2.1	-3.9	-3.1	-3.6	-1.2	-1.2	-2.3	-3.7	-6.3	-5.5	-5.5	-7.8	-7.3	-4.5	-4.3	-5.8	-4.0	-3.3	-.9	-.4	-.7	-2.0	-4.6	-7.9	-8.2	-9.6	-11.1	-10.6	-11.3	-11.4	-9.8	-8.4	-4.7
-4.0	-2.4	-1.4	-1.6	-.6	-.7	-.1	-.2	-.1	-.6	-6.0	-11.7	-11.0	-9.0	-3.9	-1.1	-.2	-1.0	-4.2	-9.1	-11.3	-4.6	-1.8	-3.7	-4.7	-5.0	-6.7	-11.2	-15.3	-16.1	-13.2	-14.1	-14.8	-14.0	-11.7	-8.2
-12.1	-11.8	-7.3	-4.7	-2.0	-.7	-.5	-.8	-.3	-.4	-5.7	-13.0	-14.0	-7.1	-1.1	-.2	.2	.2	-.7	-10.4	-14.9	-9.8	-8.3	-4.8	-2.0	-.6	-.6	-.4	-3.0	-10.9	-18.3	-17.3	-12.5	-9.0	-8.8	-11.8
-4.4	-8.7	-7.1	-5.4	-3.7	-1.7	-.6	-.1	.1	-.1	-.2	-5.7	-6.2	-6.5	-2.9	-.5	.0	.2	.4	-4.8	-7.6	-3.0	-3.5	-1.7	-.2	.1	.3	.5	.2	-3.7	-5.9	-2.7	-3.7	-2.7	-3.0	-3.7
-2.6	-3.6	-3.8	-2.7	-3.4	-2.2	-1.8	-1.1	-.6	-.2	-.6	-3.6	-4.1	-3.2	-4.0	-2.8	-1.9	-1.0	-.2	.1	-1.4	-1.9	-2.0	-2.1	-.9	-.4	-.3	-.2	.2	-.2	-2.3	-2.5	-2.8	-2.2	-1.7	-2.9
-2.8	-2.1	-3.0	-2.6	-2.0	-2.3	-2.3	-2.1	-1.9	-2.1	-2.9	-3.6	-2.7	-2.9	-3.2	-3.6	-3.5	-3.3	-2.2	-2.2	-2.3	-2.6	-2.7	-3.3	-3.9	-3.5	-2.9	-2.5	-2.0	-1.6	-1.7	-1.7	-2.3	-3.2	-3.4	-4.0
-4.2	-3.9	-3.2	-3.0	-3.1	-3.0	-3.0	-3.2	-2.9	-3.5	-4.3	-4.3	-3.2	-3.2	-3.6	-3.7	-3.5	-3.5	-2.7	-2.8	-3.1	-3.4	-3.1	-3.0	-3.3	-3.5	-3.7	-3.4	-3.1	-3.3	-3.3	-3.2	-2.9	-3.3	-3.5	-4.4
-3.7	-3.5	-3.7	-3.5	-3.5	-3.4	-3.2	-3.2	-3.1	-2.4	-2.8	-3.4	-3.5	-3.7	-3.5	-3.2	-3.2	-3.3	-3.0	-2.8	-2.7	-2.9	-3.0	-3.5	-3.2	-3.2	-2.9	-2.9	-3.1	-3.1	-3.1	-3.3	-3.5	-4.1	-4.4	-4.1
-3.2	-3.4	-3.4	-3.7	-3.7	-3.6	-3.4	-3.0	-2.8	-2.4	-3.5	-4.1	-3.8	-3.3	-3.5	-3.5	-3.5	-3.3	-2.6	-2.1	-1.7	-1.3	-1.4	-2.0	-2.3	-2.1	-2.2	-2.2	-1.6	-1.5	-1.4	-1.2	-1.5	-2.4	-3.0	-3.1
-1.9	-2.1	-2.6	-2.8	-2.9	-3.0	-2.9	-2.6	-2.0	-1.6	-1.9	-2.3	-2.4	-2.5	-2.2	-2.1	-1.8	-1.6	-1.0	-.8	-.5	-.6	-.9	-1.2	-1.4	-1.3	-1.3	-1.1	-.9	-.6	-.4	-.3	-.6	-.8	-2.1	-2.3

Figure 46. ATOVS SD O-B brightness temperature differences (deg C). JANUARY 2006
Channel: HIRS11 (500 - 700 hPa)
NOAA16, using all observations



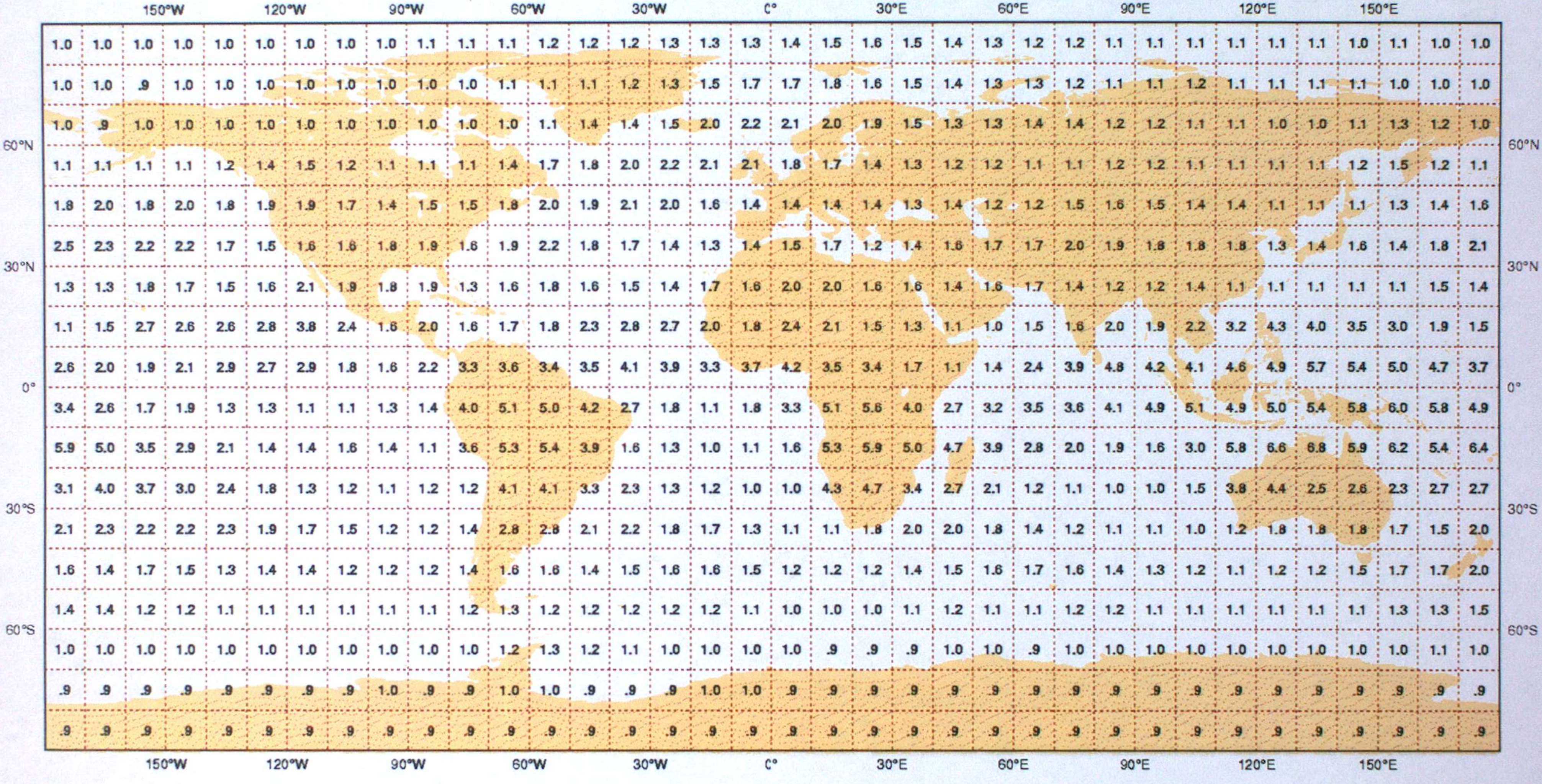
2.7	2.6	2.7	2.6	3.0	2.8	2.6	2.6	2.8	3.2	4.3	4.0	4.5	4.9	4.6	4.9	5.2	5.2	5.5	6.2	7.0	5.7	4.8	4.8	4.3	3.6	3.4	3.5	3.7	3.2	2.8	2.5	2.5	2.7	2.7	2.8
2.3	2.4	2.3	2.3	2.3	2.4	2.4	2.2	2.2	2.6	2.9	3.2	4.0	3.4	3.5	5.2	6.5	7.3	7.0	7.2	6.3	5.4	4.5	4.1	4.2	3.7	2.7	3.0	3.4	3.0	2.8	2.6	2.8	2.8	2.9	2.6
2.2	2.4	3.1	4.1	3.4	3.0	2.7	2.6	2.4	2.4	2.6	3.0	4.1	5.8	6.2	6.5	8.7	8.9	8.3	8.1	7.0	5.4	4.6	3.8	4.3	3.8	3.6	3.5	3.2	3.0	2.7	2.9	4.3	5.9	5.1	2.8
4.2	4.4	4.7	4.9	6.3	6.8	6.9	5.0	3.8	3.5	3.9	4.6	6.5	7.2	7.8	8.7	8.0	7.7	6.8	6.2	4.6	4.4	4.3	3.7	3.3	3.2	4.1	4.9	4.5	4.0	3.3	3.8	6.6	9.0	5.9	5.1
9.0	9.7	8.3	8.7	8.1	8.7	8.4	7.5	5.9	6.1	6.2	7.0	7.8	8.1	8.6	7.6	5.6	4.9	5.6	6.0	6.1	5.6	5.9	4.4	4.7	7.3	7.6	7.2	6.5	5.6	3.8	3.8	4.9	6.2	7.4	8.3
10.3	10.0	8.8	8.2	6.9	6.0	6.5	6.4	7.4	7.6	6.5	7.7	8.3	7.1	6.5	5.1	4.9	5.9	6.2	7.0	5.0	5.5	6.6	6.9	7.9	10.1	9.6	9.3	8.4	8.0	6.1	6.7	7.4	7.0	8.0	9.2
4.4	4.6	6.5	6.1	5.5	5.5	7.2	6.8	6.0	6.3	4.2	5.7	6.5	5.4	4.9	4.1	6.2	5.3	6.6	6.8	5.3	5.6	5.3	5.8	6.4	4.7	3.6	3.6	4.0	2.8	3.2	3.0	2.8	3.1	4.9	4.8
2.1	4.7	8.8	8.5	8.7	9.3	11.4	7.7	4.6	6.6	5.0	4.7	5.6	6.9	8.4	8.1	6.4	5.5	6.2	5.8	4.0	3.8	2.4	1.9	3.8	3.9	4.9	4.3	5.2	8.2	10.9	9.8	8.5	7.0	4.2	3.0
7.1	5.7	5.9	6.9	9.1	8.2	9.2	5.6	5.1	6.8	9.6	10.2	9.7	10.1	11.7	11.2	9.7	10.2	11.2	9.8	9.4	5.0	2.0	3.4	6.5	10.2	12.6	10.9	10.5	11.9	12.6	14.1	13.6	13.0	12.3	9.6
8.8	7.0	4.9	5.9	3.4	3.7	2.2	2.6	2.3	3.1	11.3	13.7	13.3	11.6	7.9	4.5	2.0	4.0	8.8	13.5	14.8	10.9	7.3	9.3	10.2	9.9	11.2	13.2	13.3	12.7	12.7	13.6	14.4	14.8	14.4	12.3
14.9	13.4	10.4	9.6	6.6	4.5	4.1	4.3	3.7	2.8	9.9	14.4	14.6	10.8	4.6	2.8	1.5	1.9	3.3	14.0	15.4	13.5	12.9	10.7	8.1	5.4	4.7	3.2	6.6	13.8	16.3	16.6	14.7	14.6	13.3	15.5
8.9	11.7	10.3	9.9	8.1	6.1	4.5	3.1	2.2	3.2	2.7	11.9	12.8	10.3	7.3	3.5	2.8	1.6	1.9	11.2	13.0	9.5	8.3	6.5	3.3	2.7	1.7	1.2	3.2	9.4	10.8	6.8	7.8	7.1	7.6	7.8
6.7	8.4	7.6	7.3	7.6	6.0	5.6	4.4	3.6	3.3	4.3	9.8	10.1	7.7	8.2	6.3	5.6	4.1	3.1	3.3	6.3	6.6	6.9	6.6	4.4	3.4	3.1	3.1	2.1	3.6	6.0	6.1	6.2	5.7	5.2	6.9
5.8	5.4	6.4	5.6	5.0	5.2	5.2	4.7	4.6	4.9	6.1	7.0	6.7	6.2	6.4	6.3	6.1	5.9	4.8	4.9	5.2	6.0	6.3	6.3	6.8	6.1	5.5	5.1	4.5	4.1	4.5	4.8	5.5	6.5	6.7	7.5
6.2	6.0	5.2	4.8	4.7	4.7	4.5	4.9	4.6	5.1	5.8	6.1	5.4	5.1	5.2	5.3	5.1	4.7	3.6	3.5	4.0	4.4	4.5	4.1	4.5	4.8	4.8	4.4	4.3	4.5	4.6	4.8	4.7	5.2	5.2	6.4
4.1	4.2	4.2	3.9	3.9	3.7	3.6	3.8	3.8	3.6	3.9	5.0	5.6	4.8	4.1	3.8	3.7	3.5	3.2	3.1	2.9	3.3	3.7	4.1	3.6	3.7	3.6	3.5	3.4	3.5	3.5	3.6	3.9	4.2	4.5	4.3
3.4	3.5	3.3	3.7	3.4	3.4	3.7	3.9	4.0	3.1	3.5	4.2	4.0	3.4	3.4	3.5	3.8	3.8	3.2	2.8	2.8	2.6	2.3	2.3	2.6	2.8	2.4	2.3	2.2	2.2	2.1	2.1	2.3	3.3	3.9	3.3
3.1	2.9	3.0	3.2	3.2	3.3	3.1	2.8	2.5	2.5	2.8	2.8	2.9	2.8	2.7	3.1	2.7	2.5	2.3	2.1	2.0	1.9	1.9	2.0	2.1	2.2	2.1	2.0	1.9	1.9	1.8	1.6	1.7	2.6	3.6	3.2

Figure 47. ATOVS MEAN O-B brightness temperature differences (deg C). JANUARY 2006
Channel: HIRS4 (400 hPa)
NOAA16, using all observations



.0	.0	.0	.0	.0	.1	.1	.1	.1	.1	.0	.0	-.1	-.2	-.2	-.3	-.4	-.5	-.5	-.6	-.7	-.6	-.5	-.4	-.4	-.3	-.3	-.3	-.3	-.3	-.2	-.2	-.2	-.1	-.1	.0
.1	.1	.1	.1	.1	.2	.2	.2	.3	.2	.2	.1	.1	.1	.0	-.3	-.6	-.7	-.9	-.9	-.7	-.5	-.4	-.4	-.3	-.2	-.2	-.2	-.3	-.3	-.3	-.2	-.1	-.1	.0	.1
.1	.1	.0	.0	.1	.1	.2	.2	.3	.3	.2	.2	.1	-.1	-.3	-.5	-1.0	-1.2	-1.2	-1.2	-.9	-.5	-.4	-.3	-.4	-.3	-.2	-.2	-.2	-.2	-.1	-.1	-.1	-.2	-.1	.1
.0	-.1	-.1	-.1	-.3	-.5	-.4	-.1	.1	.1	.1	.0	-.4	-.5	-.8	-1.3	-1.2	-1.0	-.7	-.6	-.4	-.4	-.3	-.2	-.2	-.1	-.2	-.2	-.1	-.1	.0	.0	-.2	-.5	-.2	-.1
-.6	-.9	-.9	-.9	-.8	-1.1	-1.1	-.6	-.3	-.3	-.4	-.6	-.7	-.8	-1.0	-1.0	-.6	-.3	-.4	-.3	-.4	-.3	-.3	-.1	-.2	-.6	-.6	-.5	-.3	-.2	.0	.1	.0	-.2	-.3	-.5
-1.5	-1.5	-1.3	-1.2	-.7	-.5	-.4	-.4	-.5	-.7	-.5	-.7	-1.0	-.7	-.5	-.3	-.2	-.2	-.3	-.4	-.2	-.3	-.5	-.5	-.6	-1.2	-1.0	-.9	-.7	-.6	-.2	-.3	-.4	-.3	-.5	-.9
.1	.0	-.5	-.4	-.3	-.2	-.6	-.6	-.3	-.4	.0	-.1	-.2	-.1	.0	.1	-.2	-.1	-.4	-.5	-.3	-.3	-.2	-.3	-.3	-.1	.0	.1	.2	.2	.2	.2	.3	.3	.1	.1
.4	.2	-.8	-1.0	-1.1	-1.2	-2.0	-.6	.0	-.3	-.1	.0	-.2	-.6	-1.2	-1.4	-.8	-.4	-.7	-.5	.0	.2	.3	.3	.1	.0	-.3	-.2	-.6	-1.1	-2.0	-1.8	-1.5	-.9	-.2	.1
-.8	-.3	-.3	-.4	-.8	-.5	-.7	.0	.0	-.3	-1.2	-1.9	-1.6	-1.8	-2.6	-2.3	-1.4	-1.6	-2.6	-2.0	-1.5	.0	.3	.2	-.3	-1.5	-2.9	-3.2	-3.8	-4.4	-4.2	-4.6	-4.8	-4.2	-3.7	-2.0
-1.4	-.6	-.1	-.1	.3	.3	.4	.3	.3	.0	-2.3	-4.2	-3.7	-2.6	-1.0	-.1	.3	-.2	-1.7	-3.6	-4.4	-1.7	-.6	-1.1	-1.4	-1.6	-2.4	-4.3	-6.1	-6.5	-5.4	-5.8	-6.2	-6.1	-4.9	-3.2
-4.9	-4.4	-2.3	-1.1	-.2	.1	.1	.0	.2	.3	-1.8	-4.5	-4.8	-1.9	-.1	.1	.3	.3	-.3	-4.0	-5.5	-3.5	-2.8	-1.6	-.6	-.1	.0	.0	-1.4	-4.9	-7.7	-7.2	-5.0	-3.8	-3.6	-4.9
-1.4	-2.8	-2.4	-1.4	-.8	-.2	.1	.2	.3	.2	.2	-1.8	-1.9	-1.8	-.7	.1	.2	.3	.3	-1.6	-2.4	-1.2	-.9	-.3	.1	.2	.3	.3	.1	-1.4	-1.9	-.6	-.8	-.6	-.8	-1.0
-.6	-.8	-.9	-.6	-.8	-.4	-.3	-.1	.1	.2	.1	-.7	-.9	-.5	-.8	-.5	-.2	.0	.2	.2	-.2	-.4	-.4	-.3	.0	.1	.2	.2	.2	.2	-.3	-.4	-.3	-.3	-.2	-.5
-.4	-.3	-.5	-.4	-.3	-.3	-.3	-.2	-.1	-.1	-.2	-.4	-.3	-.3	-.4	-.5	-.5	-.4	-.2	-.1	-.1	-.2	-.3	-.5	-.6	-.5	-.4	-.3	-.1	-.1	-.1	-.1	-.3	-.5	-.6	-.7
-.5	-.4	-.3	-.2	-.2	-.2	-.1	-.2	-.2	-.2	-.3	-.3	-.2	-.2	-.3	-.3	-.3	-.2	-.1	.0	.0	-.1	-.1	.0	-.1	-.2	-.2	-.1	-.1	-.1	-.1	-.1	-.2	-.2	-.3	-.5
-.1	-.1	-.1	-.1	.0	.0	.0	.0	-.1	.0	.0	-.1	-.2	-.2	-.2	-.1	-.1	-.1	.0	.0	.1	.1	.0	-.1	.0	.0	.0	.0	.0	.0	.0	.0	-.1	-.1	-.2	-.2
.0	.0	.0	.0	.0	-.1	.0	.0	.0	.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.0	.0	.0
.1	.1	.1	.1	.0	.0	.0	.0	.1	.1	.2	.1	.1	.1	.1	.1	.1	.1	.1	.1	.2	.2	.2	.1	.1	.1	.1	.1	.1	.1	.1	.2	.2	.1	.1	.1

Figure 48. ATOVS SD O-B brightness temperature differences (deg C). JANUARY 2006
Channel: HIRS4 (400 hPa)
NOAA16, using all observations



1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.2	1.2	1.2	1.3	1.3	1.3	1.4	1.5	1.6	1.5	1.4	1.3	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.0	1.1	1.0	1.0
1.0	1.0	.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.1	1.1	1.2	1.3	1.5	1.7	1.7	1.8	1.6	1.5	1.4	1.3	1.3	1.2	1.1	1.1	1.2	1.1	1.1	1.1	1.1	1.0	1.0	1.0
1.0	.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.4	1.4	1.5	2.0	2.2	2.1	2.0	1.9	1.5	1.3	1.3	1.4	1.4	1.2	1.2	1.1	1.1	1.0	1.0	1.1	1.3	1.2	1.0
1.1	1.1	1.1	1.1	1.2	1.4	1.5	1.2	1.1	1.1	1.1	1.4	1.7	1.8	2.0	2.2	2.1	2.1	1.8	1.7	1.4	1.3	1.2	1.2	1.1	1.1	1.2	1.2	1.1	1.1	1.1	1.1	1.2	1.5	1.2	1.1
1.8	2.0	1.8	2.0	1.8	1.9	1.9	1.7	1.4	1.5	1.5	1.8	2.0	1.9	2.1	2.0	1.6	1.4	1.4	1.4	1.4	1.3	1.4	1.2	1.2	1.5	1.6	1.5	1.4	1.4	1.1	1.1	1.1	1.3	1.4	1.6
2.5	2.3	2.2	2.2	1.7	1.5	1.6	1.6	1.8	1.9	1.6	1.9	2.2	1.8	1.7	1.4	1.3	1.4	1.5	1.7	1.2	1.4	1.6	1.7	1.7	2.0	1.9	1.8	1.8	1.8	1.3	1.4	1.6	1.4	1.8	2.1
1.3	1.3	1.8	1.7	1.5	1.6	2.1	1.9	1.8	1.9	1.3	1.6	1.8	1.6	1.5	1.4	1.7	1.6	2.0	2.0	1.6	1.6	1.4	1.6	1.7	1.4	1.2	1.2	1.4	1.1	1.1	1.1	1.1	1.1	1.5	1.4
1.1	1.5	2.7	2.6	2.6	2.8	3.8	2.4	1.6	2.0	1.6	1.7	1.8	2.3	2.8	2.7	2.0	1.8	2.4	2.1	1.5	1.3	1.1	1.0	1.5	1.6	2.0	1.9	2.2	3.2	4.3	4.0	3.5	3.0	1.9	1.5
2.6	2.0	1.9	2.1	2.9	2.7	2.9	1.8	1.6	2.2	3.3	3.6	3.4	3.5	4.1	3.9	3.3	3.7	4.2	3.5	3.4	1.7	1.1	1.4	2.4	3.9	4.8	4.2	4.1	4.6	4.9	5.7	5.4	5.0	4.7	3.7
3.4	2.6	1.7	1.9	1.3	1.3	1.1	1.1	1.3	1.4	4.0	5.1	5.0	4.2	2.7	1.8	1.1	1.8	3.3	5.1	5.6	4.0	2.7	3.2	3.5	3.6	4.1	4.9	5.1	4.9	5.0	5.4	5.8	6.0	5.8	4.9
5.9	5.0	3.5	2.9	2.1	1.4	1.4	1.6	1.4	1.1	3.6	5.3	5.4	3.9	1.6	1.3	1.0	1.1	1.6	5.3	5.9	5.0	4.7	3.9	2.8	2.0	1.9	1.6	3.0	5.8	6.6	6.8	5.9	6.2	5.4	6.4
3.1	4.0	3.7	3.0	2.4	1.8	1.3	1.2	1.1	1.2	1.2	4.1	4.1	3.3	2.3	1.3	1.2	1.0	1.0	4.3	4.7	3.4	2.7	2.1	1.2	1.1	1.0	1.0	1.5	3.8	4.4	2.5	2.6	2.3	2.7	2.7
2.1	2.3	2.2	2.2	2.3	1.9	1.7	1.5	1.2	1.2	1.4	2.8	2.8	2.1	2.2	1.8	1.7	1.3	1.1	1.1	1.8	2.0	2.0	1.8	1.4	1.2	1.1	1.1	1.0	1.2	1.8	1.8	1.8	1.7	1.5	2.0
1.6	1.4	1.7	1.5	1.3	1.4	1.4	1.2	1.2	1.2	1.4	1.6	1.6	1.4	1.5	1.6	1.6	1.5	1.2	1.2	1.2	1.4	1.5	1.6	1.7	1.6	1.4	1.3	1.2	1.1	1.2	1.2	1.5	1.7	1.7	2.0
1.4	1.4	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.2	1.3	1.2	1.2	1.2	1.2	1.2	1.1	1.0	1.0	1.0	1.1	1.2	1.1	1.1	1.2	1.2	1.1	1.1	1.1	1.1	1.1	1.1	1.3	1.3	1.5
1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.2	1.3	1.2	1.1	1.0	1.0	1.0	1.0	.9	.9	.9	1.0	1.0	.9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.1	1.0
.9	.9	.9	.9	.9	.9	.9	.9	1.0	.9	.9	1.0	1.0	.9	.9	.9	1.0	1.0	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9
.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9	.9

Figure 49. ATOVS MEAN O-B brightness temperature differences (deg C). JANUARY 2006
Channel: AMSUA-5 (700 hPa)
NOAA16, using all observations

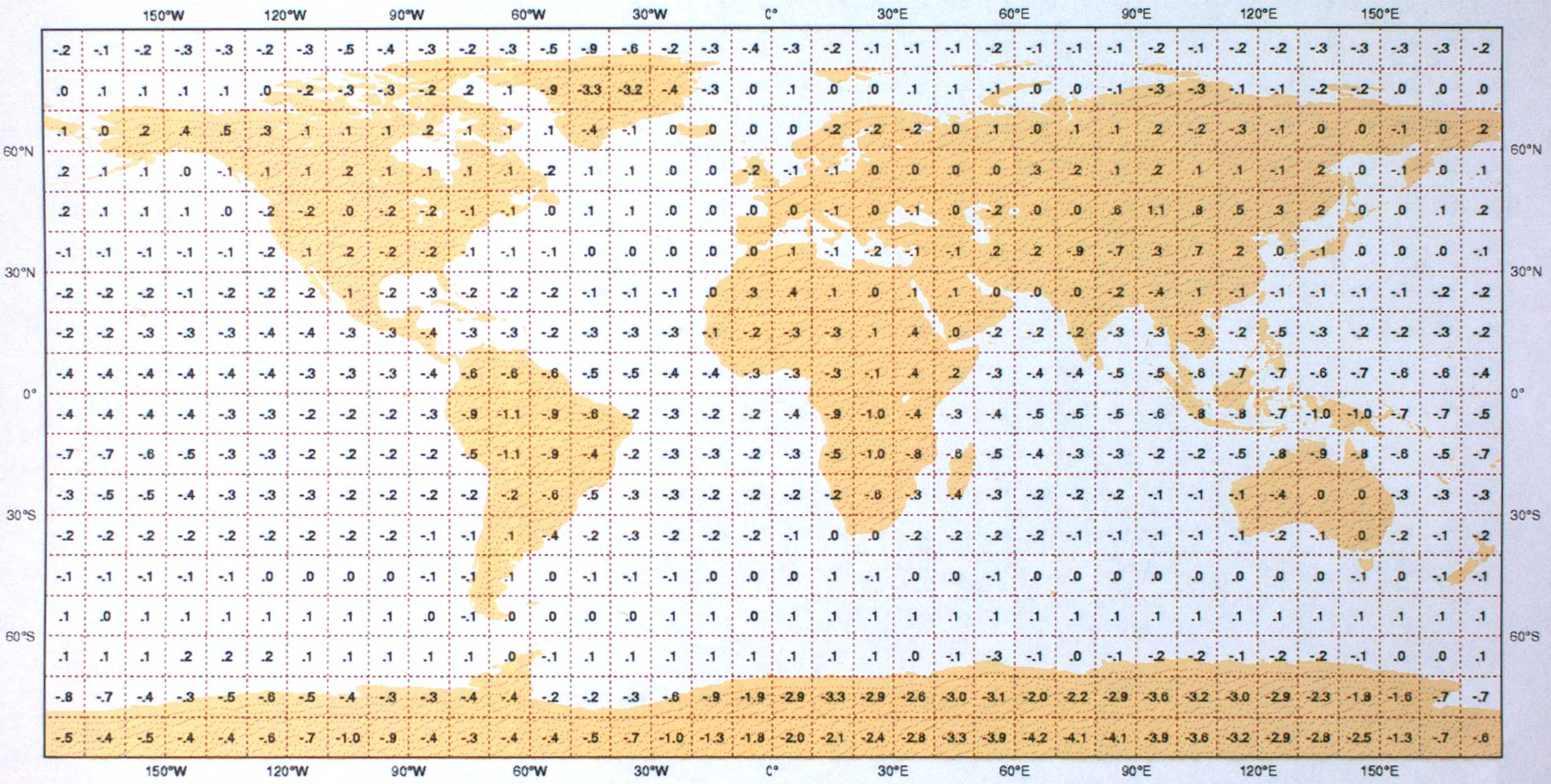
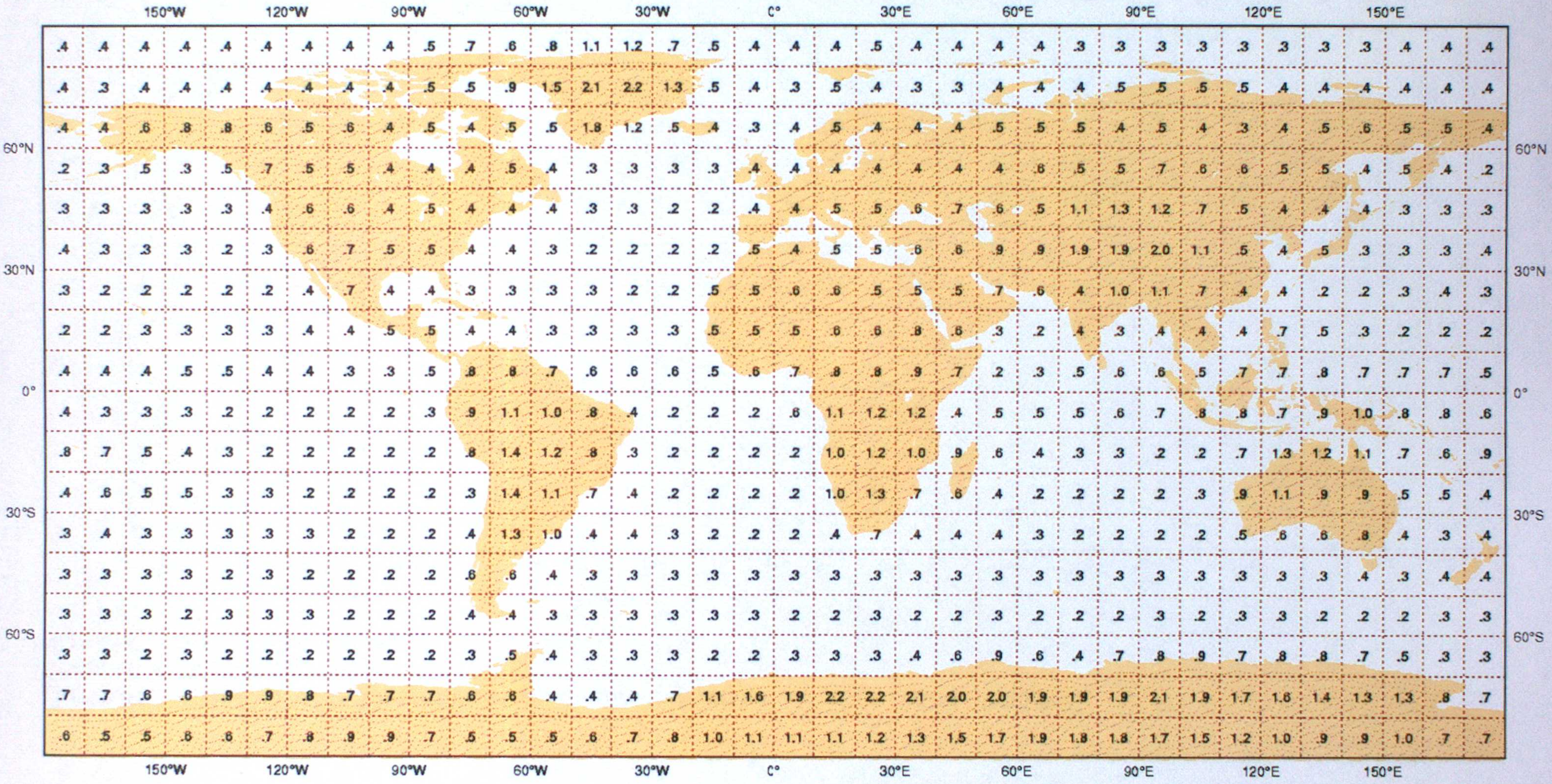

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
-.2 -.1 -.2 -.3 -.3 -.2 -.3 -.5 -.4 -.3 -.2 -.3 -.5 -.9 -.6 -.2 -.3 -.4 -.3 -.2 -.1 -.1 -.1 -.2 -.1 -.1 -.1 -.2 -.1 -.2 -.2 -.3 -.3 -.3 -.3 -.2
.0 .1 .1 .1 .1 .0 -.2 -.3 -.3 -.2 .2 .1 -.9 -3.3 -3.2 -.4 -.3 .0 .1 .0 .0 .1 .1 -.1 .0 .0 -.1 -.3 -.3 -.1 -.1 -.2 -.2 .0 .0 .0
.1 .0 .2 .4 .5 .3 .1 .1 .1 .2 .1 .1 .1 -.4 -.1 .0 .0 .0 .0 -.2 -.2 -.2 .0 .1 .0 .1 .1 .2 -.2 -.3 -.1 .0 .0 -.1 .0 .2
.2 .1 .1 .0 -.1 .1 .1 .2 .1 .1 .1 .1 .2 .1 .1 .0 .0 -.2 -.1 -.1 .0 .0 .0 .0 .3 .2 .1 .2 .1 .1 -.1 .2 .0 -.1 .0 .1
.2 .1 .1 .1 .0 -.2 -.2 .0 -.2 -.2 -.1 -.1 .0 .1 .1 .0 .0 .0 .0 -.1 .0 -.1 .0 -.2 .0 .0 .6 1.1 .8 .5 .3 .2 .0 .0 .1 .2
-.1 -.1 -.1 -.1 -.1 -.2 .1 .2 -.2 -.2 -.1 -.1 -.1 .0 .0 .0 .0 .0 .1 -.1 -.2 -.1 -.1 .2 .2 -.9 -.7 .3 .7 .2 .0 -.1 .0 .0 .0 -.1
-.2 -.2 -.2 -.1 -.2 -.2 -.2 .1 -.2 -.3 -.2 -.2 -.2 -.1 -.1 -.1 .0 .3 .4 .1 .0 .1 .1 .0 .0 .0 -.2 -.4 .1 -.1 -.1 -.1 -.1 -.1 -.2 -.2
-.2 -.2 -.3 -.3 -.3 -.4 -.4 -.3 -.3 -.4 -.3 -.3 -.2 -.3 -.3 -.3 -.1 -.2 -.3 -.3 .1 .4 .0 -.2 -.2 -.2 -.3 -.3 -.3 -.2 -.5 -.3 -.2 -.2 -.3 -.2
-.4 -.4 -.4 -.4 -.4 -.4 -.3 -.3 -.3 -.4 -.6 -.6 -.6 -.5 -.5 -.4 -.4 -.3 -.3 -.3 -.1 .4 .2 -.3 -.4 -.4 -.5 -.5 -.6 -.7 -.7 -.6 -.7 -.6 -.6 -.4
-.4 -.4 -.4 -.4 -.3 -.3 -.2 -.2 -.2 -.3 -.9 -1.1 -.9 -.6 -.2 -.3 -.2 -.2 -.4 -.9 -1.0 -.4 -.3 -.4 -.5 -.5 -.5 -.6 -.8 -.8 -.7 -1.0 -1.0 -.7 -.7 -.5
-.7 -.7 -.6 -.5 -.3 -.3 -.2 -.2 -.2 -.2 -.5 -1.1 -.9 -.4 -.2 -.3 -.3 -.2 -.3 -.5 -1.0 -.8 -.6 -.5 -.4 -.3 -.3 -.2 -.2 -.5 -.8 -.9 -.8 -.6 -.5 -.7
-.3 -.5 -.5 -.4 -.3 -.3 -.3 -.2 -.2 -.2 -.2 -.2 -.6 -.5 -.3 -.3 -.2 -.2 -.2 -.2 -.6 -.3 -.4 -.3 -.2 -.2 -.2 -.1 -.1 -.1 -.4 .0 .0 -.3 -.3 -.3
-.2 -.2 -.2 -.2 -.2 -.2 -.2 -.2 -.2 -.1 -.1 .1 -.4 -.2 -.3 -.2 -.2 -.2 -.1 .0 .0 -.2 -.2 -.2 -.2 -.1 -.1 -.1 -.1 -.1 -.2 -.1 .0 -.2 -.1 -.2
-.1 -.1 -.1 -.1 -.1 .0 .0 .0 .0 -.1 -.1 .1 .0 -.1 -.1 -.1 .0 .0 .0 .1 -.1 .0 .0 -.1 .0 .0 .0 .0 .0 .0 .0 .0 -.1 .0 -.1 -.1
.1 .0 .1 .1 .1 .1 .1 .1 .1 .0 -.1 .0 .0 .0 .0 .1 .1 .0 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1 .1
.1 .1 .1 .2 .2 .2 .1 .1 .1 .1 .1 .0 -.1 .1 .1 .1 .1 .1 .1 .1 .1 .0 -.1 -.3 -.1 .0 -.1 -.2 -.2 -.1 -.2 -.2 -.1 .0 .0 .1
-.8 -.7 -.4 -.3 -.5 -.6 -.5 -.4 -.3 -.3 -.4 -.4 -.2 -.2 -.3 -.6 -.9 -1.9 -2.9 -3.3 -2.9 -2.6 -3.0 -3.1 -2.0 -2.2 -2.9 -3.6 -3.2 -3.0 -2.9 -2.3 -1.8 -1.6 -.7 -.7
-.5 -.4 -.5 -.4 -.4 -.6 -.7 -1.0 -.9 -.4 -.3 -.4 -.4 -.5 -.7 -1.0 -1.3 -1.8 -2.0 -2.1 -2.4 -2.8 -3.3 -3.9 -4.2 -4.1 -4.1 -3.9 -3.6 -3.2 -2.9 -2.8 -2.5 -1.3 -.7 -.6

Figure 50. ATOVS SD O-B brightness temperature differences (deg C). JANUARY 2006
Channel: AMSUA-5 (700 hPa)
NOAA16, using all observations



.4	.4	.4	.4	.4	.4	.4	.4	.4	.5	.7	.6	.8	1.1	1.2	.7	.5	.4	.4	.4	.5	.4	.4	.4	.4	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.4
.4	.3	.4	.4	.4	.4	.4	.4	.4	.5	.5	.9	1.5	2.1	2.2	1.3	.5	.4	.3	.5	.4	.3	.3	.4	.4	.4	.5	.5	.5	.5	.4	.4	.4	.4	.4	.4
.4	.4	.6	.8	.8	.6	.5	.6	.4	.5	.4	.5	.5	1.8	1.2	.5	.4	.3	.4	.5	.4	.4	.4	.5	.5	.5	.4	.5	.4	.3	.4	.5	.6	.5	.5	.4
.2	.3	.5	.3	.5	.7	.5	.5	.4	.4	.4	.5	.4	.3	.3	.3	.3	.4	.4	.4	.4	.4	.4	.4	.6	.5	.5	.7	.6	.6	.5	.5	.4	.5	.4	.2
.3	.3	.3	.3	.3	.4	.6	.6	.4	.5	.4	.4	.4	.3	.3	.2	.2	.4	.4	.5	.5	.6	.7	.6	.5	1.1	1.3	1.2	.7	.5	.4	.4	.4	.3	.3	.3
.4	.3	.3	.3	.2	.3	.6	.7	.5	.5	.4	.4	.3	.2	.2	.2	.2	.5	.4	.5	.5	.6	.6	.9	.9	1.9	1.9	2.0	1.1	.5	.4	.5	.3	.3	.3	.4
.3	.2	.2	.2	.2	.2	.4	.7	.4	.4	.3	.3	.3	.3	.2	.2	.5	.5	.6	.6	.5	.5	.5	.7	.6	.4	1.0	1.1	.7	.4	.4	.2	.2	.3	.4	.3
.2	.2	.3	.3	.3	.3	.4	.4	.5	.5	.4	.4	.3	.3	.3	.3	.5	.5	.5	.6	.6	.8	.6	.3	.2	.4	.3	.4	.4	.4	.7	.5	.3	.2	.2	.2
.4	.4	.4	.5	.5	.4	.4	.3	.3	.5	.8	.8	.7	.6	.6	.6	.5	.6	.7	.8	.8	.9	.7	.2	.3	.5	.6	.6	.5	.7	.7	.8	.7	.7	.7	.5
.4	.3	.3	.3	.2	.2	.2	.2	.2	.3	.9	1.1	1.0	.8	.4	.2	.2	.2	.6	1.1	1.2	1.2	.4	.5	.5	.5	.6	.7	.8	.8	.7	.9	1.0	.8	.8	.6
.8	.7	.5	.4	.3	.2	.2	.2	.2	.2	.8	1.4	1.2	.8	.3	.2	.2	.2	.2	1.0	1.2	1.0	.9	.6	.4	.3	.3	.2	.2	.7	1.3	1.2	1.1	.7	.6	.9
.4	.6	.5	.5	.3	.3	.2	.2	.2	.2	.3	1.4	1.1	.7	.4	.2	.2	.2	.2	1.0	1.3	.7	.6	.4	.2	.2	.2	.2	.3	.9	1.1	.9	.9	.5	.5	.4
.3	.4	.3	.3	.3	.3	.3	.2	.2	.2	.4	1.3	1.0	.4	.4	.3	.2	.2	.2	.4	.7	.4	.4	.4	.3	.2	.2	.2	.2	.5	.6	.6	.8	.4	.3	.4
.3	.3	.3	.3	.2	.3	.2	.2	.2	.2	.6	.6	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.3	.4	.4
.3	.3	.3	.2	.3	.3	.3	.2	.2	.2	.4	.4	.3	.3	.3	.3	.3	.3	.2	.2	.3	.2	.2	.3	.2	.2	.2	.3	.2	.3	.3	.2	.2	.2	.3	.3
.3	.3	.2	.3	.2	.2	.2	.2	.2	.2	.3	.5	.4	.3	.3	.3	.2	.2	.3	.3	.3	.4	.6	.9	.6	.4	.7	.8	.9	.7	.8	.8	.7	.5	.3	.3
.7	.7	.6	.6	.9	.9	.8	.7	.7	.7	.6	.6	.4	.4	.4	.7	1.1	1.6	1.9	2.2	2.2	2.1	2.0	2.0	1.9	1.9	1.9	2.1	1.9	1.7	1.6	1.4	1.3	1.3	.8	.7
.6	.5	.5	.6	.6	.7	.8	.9	.9	.7	.5	.5	.5	.6	.7	.8	1.0	1.1	1.1	1.1	1.2	1.3	1.5	1.7	1.9	1.8	1.8	1.7	1.5	1.2	1.0	.9	.9	1.0	.7	.7

Figure 51. ATOVS MEAN O-B brightness temperature differences (deg C). JANUARY 2006
Channel: AMSUA-7 (300 hPa)
NOAA16, using all observations

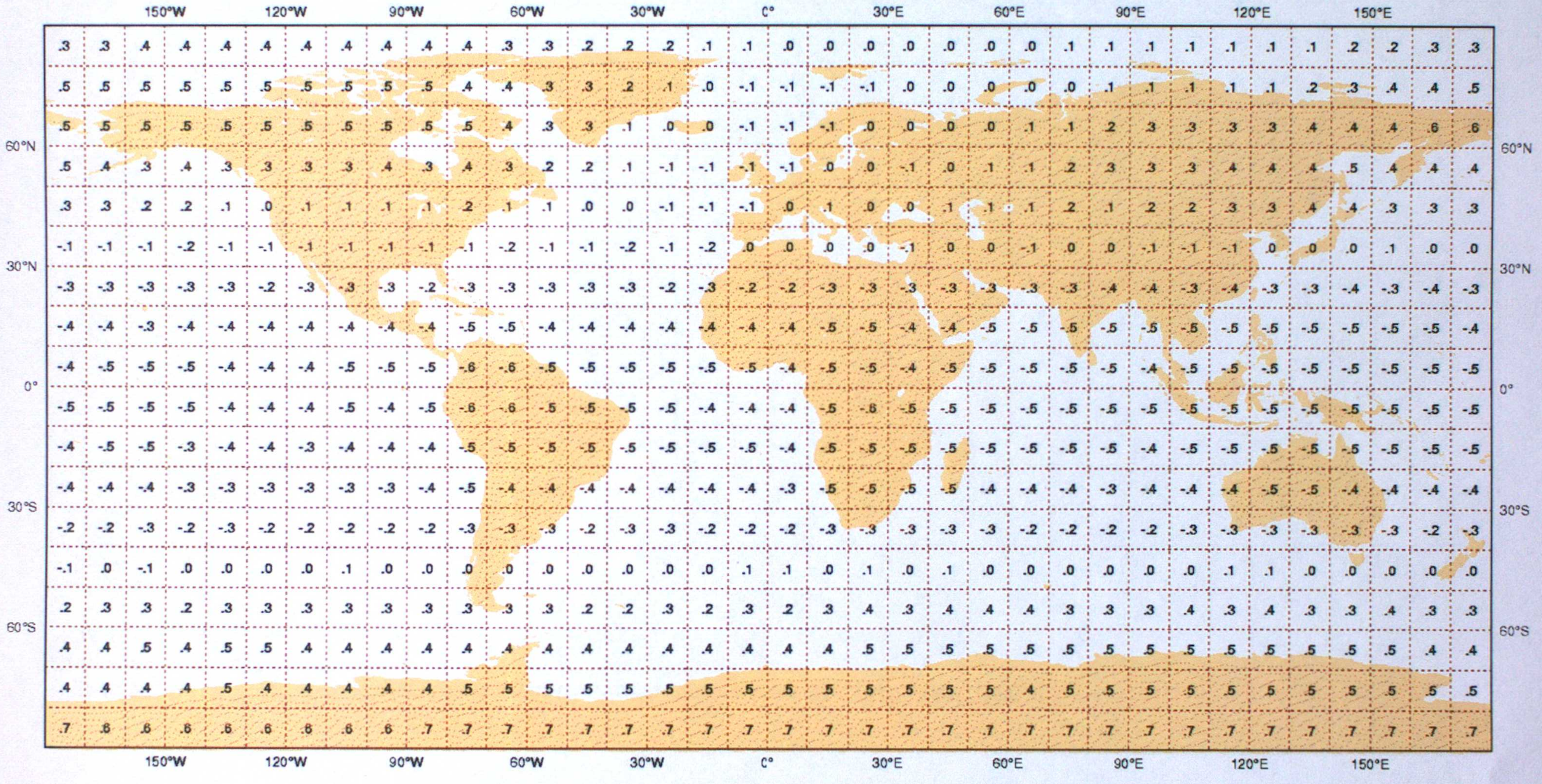

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
.3 .3 .4 .4 .4 .4 .4 .4 .4 .4 .4 .3 .3 .2 .2 .2 .1 .1 .0 .0 .0 .0 .0 .0 .0 .1 .1 .1 .1 .1 .1 .1 .2 .2 .3 .3
.5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .4 .4 .3 .3 .2 .1 .0 -.1 -.1 -.1 -.1 .0 .0 .0 .0 .0 .1 .1 .1 .1 .1 .2 .3 .4 .4 .5
.5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .4 .3 .3 .1 .0 .0 -.1 -.1 -.1 .0 .0 .0 .0 .1 .1 .2 .3 .3 .3 .3 .4 .4 .4 .6 .6
.5 .4 .3 .4 .3 .3 .3 .3 .4 .3 .4 .3 .2 .2 .1 -.1 -.1 -.1 -.1 .0 .0 -.1 .0 .1 .1 .2 .3 .3 .3 .4 .4 .4 .5 .4 .4 .4
.3 .3 .2 .2 .1 .0 .1 .1 .1 .1 .2 .1 .1 .0 .0 -.1 -.1 -.1 .0 .1 .0 .0 .1 .1 .1 .2 .1 .2 .2 .3 .3 .4 .4 .3 .3 .3
-.1 -.1 -.1 -.2 -.1 -.1 -.1 -.1 -.1 -.1 -.1 -.2 -.1 -.1 -.2 -.1 -.2 .0 .0 .0 .0 -.1 .0 .0 -.1 .0 .0 -.1 -.1 -.1 .0 .0 .0 .1 .0 .0
-.3 -.3 -.3 -.3 -.3 -.2 -.3 -.3 -.3 -.2 -.3 -.3 -.3 -.3 -.3 -.2 -.3 -.2 -.2 -.3 -.3 -.3 -.3 -.3 -.3 -.3 -.4 -.4 -.3 -.4 -.3 -.3 -.4 -.3 -.4 -.3
-.4 -.4 -.3 -.4 -.4 -.4 -.4 -.4 -.4 -.4 -.5 -.5 -.4 -.4 -.4 -.4 -.4 -.4 -.4 -.5 -.5 -.4 -.4 -.5 -.5 -.5 -.5 -.5 -.5 -.5 -.5 -.5 -.5 -.5 -.5 -.4
-.4 -.5 -.5 -.5 -.4 -.4 -.4 -.5 -.5 -.5 -.6 -.6 -.5 -.5 -.5 -.5 -.5 -.5 -.4 -.5 -.5 -.4 -.5 -.5 -.5 -.5 -.5 -.4 -.5 -.5 -.5 -.5 -.5 -.5 -.5 -.5
-.5 -.5 -.5 -.5 -.4 -.4 -.4 -.5 -.4 -.5 -.6 -.6 -.5 -.5 -.5 -.5 -.4 -.4 -.4 -.5 -.6 -.5 -.5 -.5 -.5 -.5 -.5 -.5 -.5 -.5 -.5 -.5 -.5 -.5 -.5 -.5
-.4 -.5 -.5 -.3 -.4 -.4 -.3 -.4 -.4 -.4 -.5 -.5 -.5 -.5 -.5 -.5 -.5 -.5 -.4 -.5 -.5 -.5 -.5 -.5 -.5 -.5 -.5 -.4 -.5 -.5 -.5 -.5 -.5 -.5 -.5 -.5
-.4 -.4 -.4 -.3 -.3 -.3 -.3 -.3 -.3 -.4 -.5 -.4 -.4 -.4 -.4 -.4 -.4 -.4 -.3 -.5 -.5 -.5 -.5 -.4 -.4 -.4 -.3 -.4 -.4 -.4 -.5 -.5 -.4 -.4 -.4 -.4
-.2 -.2 -.3 -.2 -.3 -.2 -.2 -.2 -.2 -.2 -.3 -.3 -.3 -.2 -.3 -.3 -.2 -.2 -.2 -.3 -.3 -.3 -.3 -.3 -.2 -.2 -.2 -.2 -.3 -.3 -.3 -.3 -.3 -.3 -.2 -.3
-.1 .0 -.1 .0 .0 .0 .0 .1 .0 .0 .0 .0 .0 .0 .0 .0 .0 .1 .1 .0 .1 .0 .1 .0 .0 .0 .0 .0 .0 .1 .1 .0 .0 .0 .0 .0
.2 .3 .3 .2 .3 .3 .3 .3 .3 .3 .3 .3 .3 .2 .2 .3 .2 .3 .2 .3 .4 .3 .4 .4 .4 .3 .3 .3 .4 .3 .4 .3 .3 .4 .3 .3
.4 .4 .5 .4 .5 .5 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .4 .4
.4 .4 .4 .4 .5 .4 .4 .4 .4 .4 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .4 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5
.7 .6 .6 .6 .6 .6 .6 .6 .6 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7 .7

Figure 52. ATOVS SD O-B brightness temperature differences (deg C). JANUARY 2006
Channel: AMSUA-7 (300 hPa)
NOAA16, using all observations

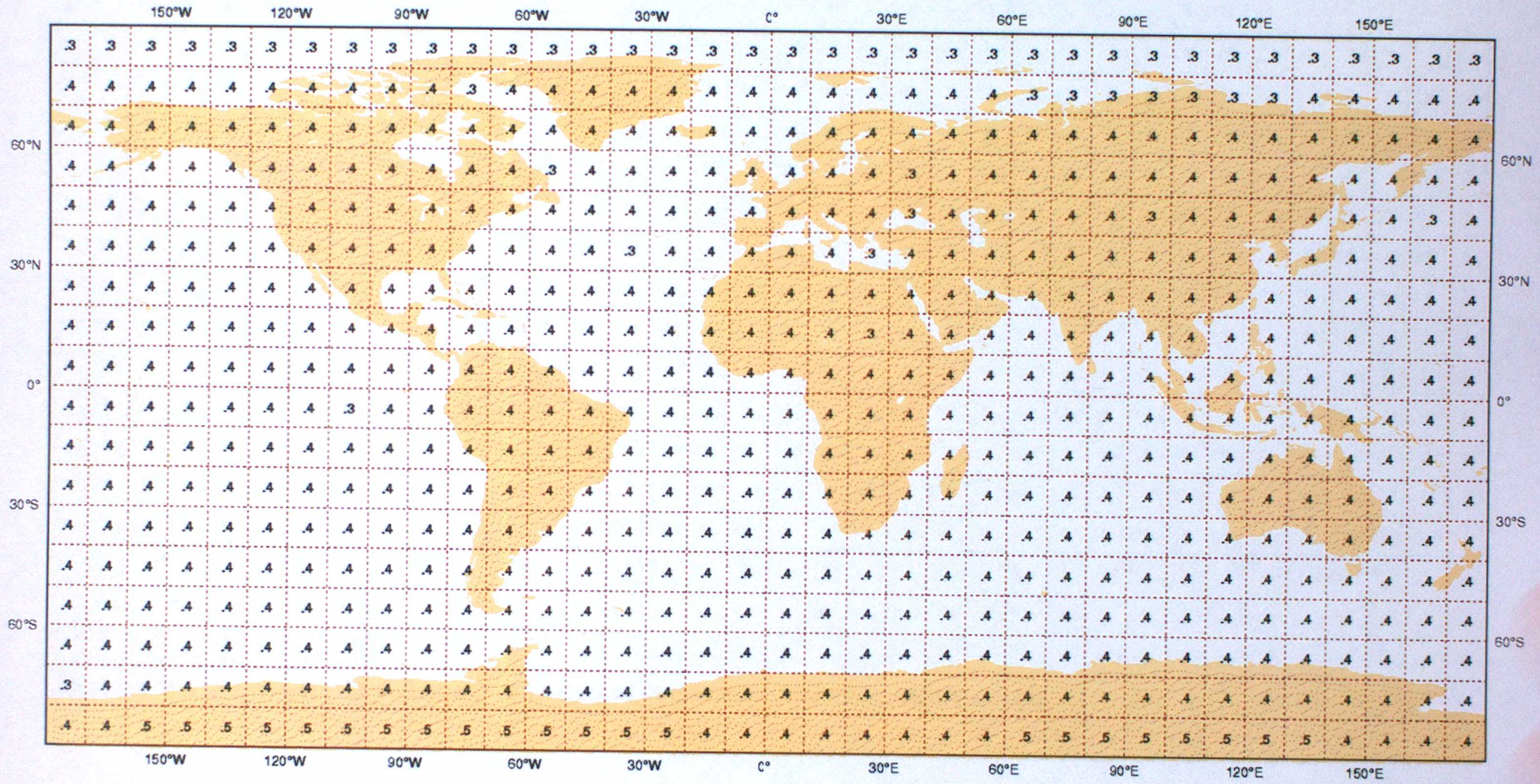

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S

Figure 53. ATOVS MEAN O-B brightness temperature differences (deg C). JANUARY 2006
Channel: AMSUA-9 (100 hPa)
NOAA16, using all observations

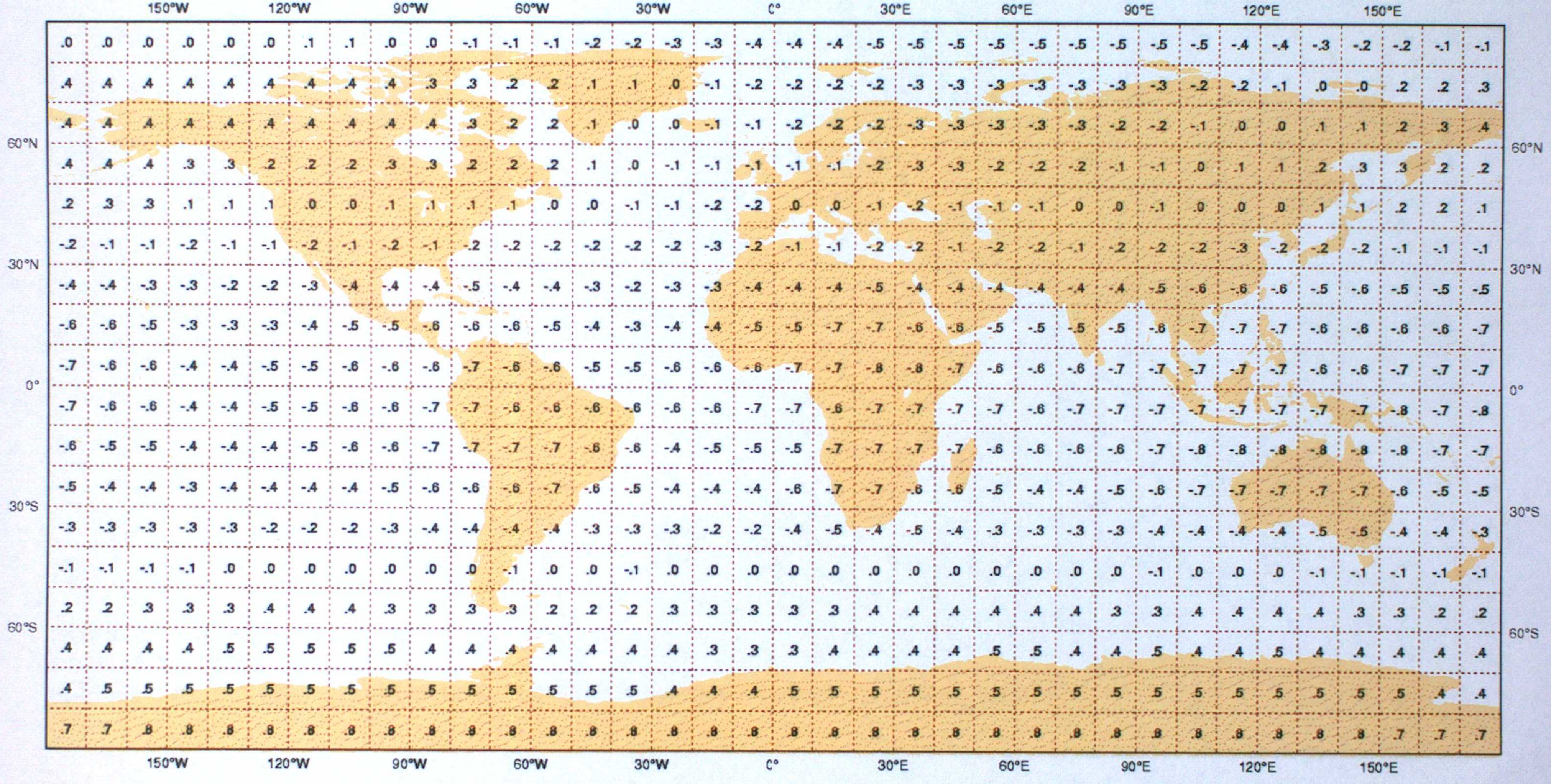
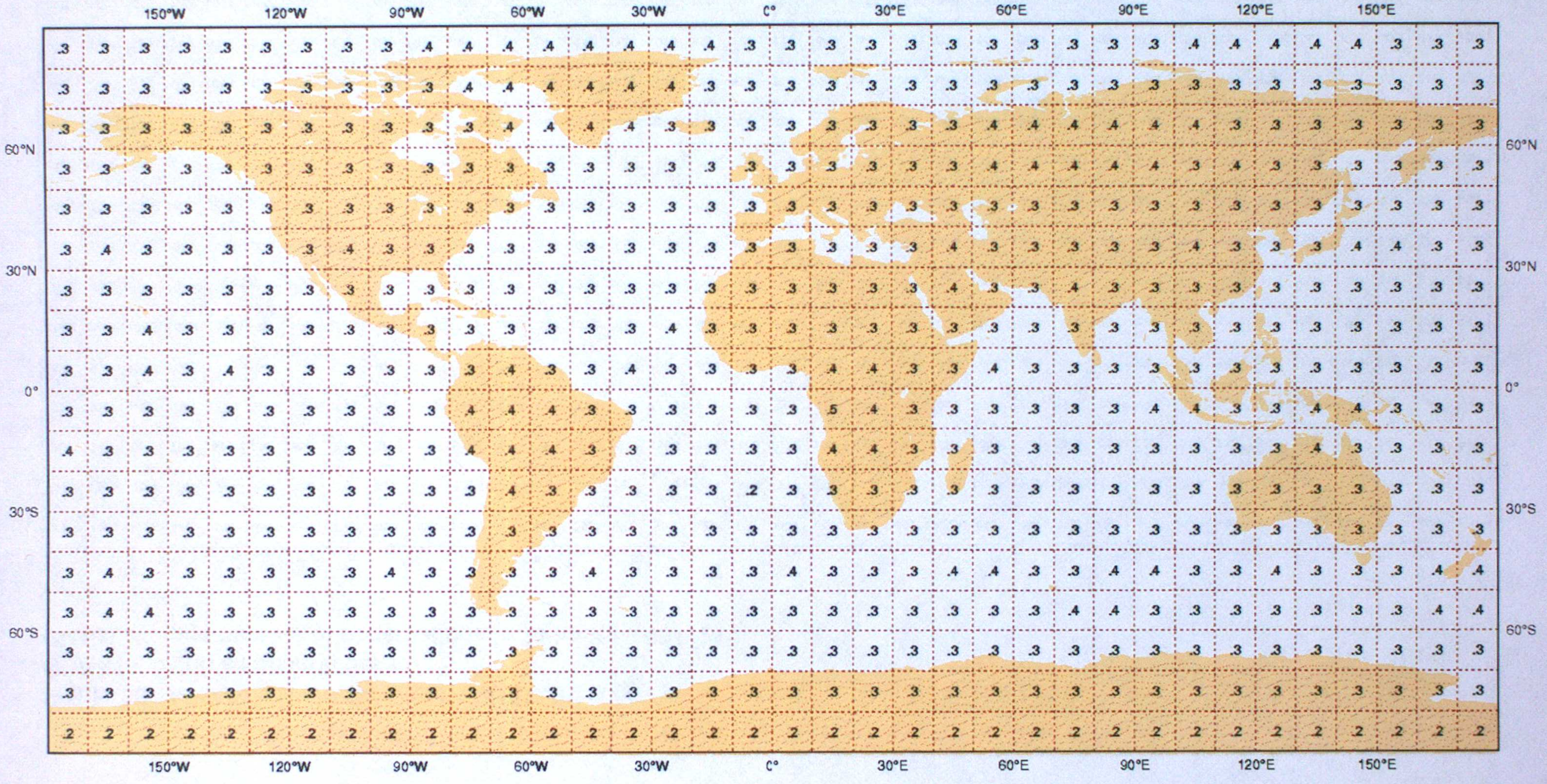
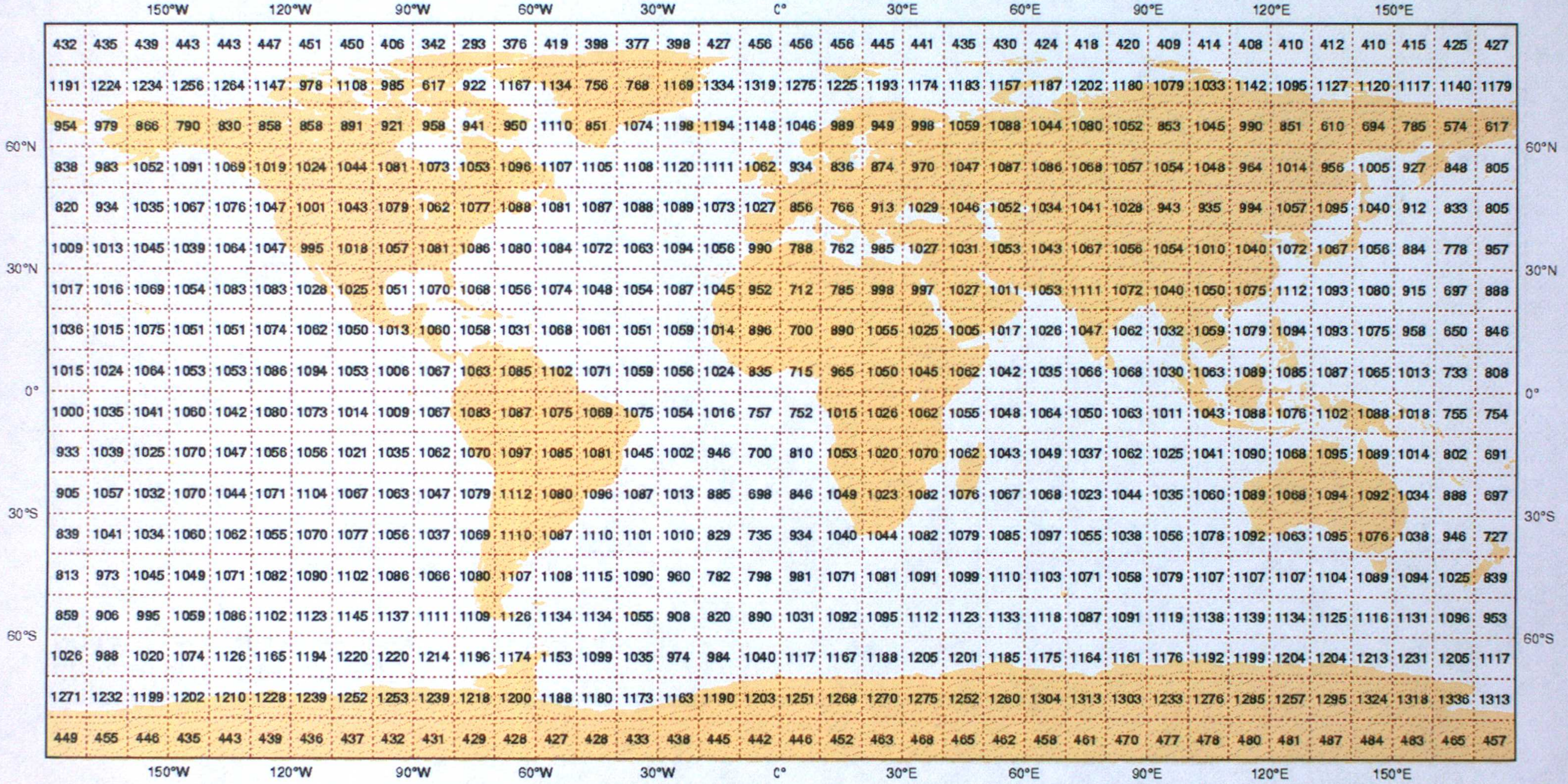

150°W 120°W 90°W 60°W 30°W C° 30°E 60°E 90°E 120°E 150°E
60°N
30°N
0°
30°S
60°S
.0 .0 .0 .0 .0 .0 .1 .1 .0 .0 -.1 -.1 -.1 -.2 -.2 -.3 -.3 -.4 -.4 -.4 -.5 -.5 -.5 -.5 -.5 -.5 -.5 -.5 -.5 -.4 -.4 -.3 -.2 -.2 -.1 -.1
.4 .4 .4 .4 .4 .4 .4 .4 .4 .3 .3 .2 .2 .1 .1 .0 -.1 -.2 -.2 -.2 -.2 -.3 -.3 -.3 -.3 -.3 -.3 -.3 -.2 -.2 -.1 .0 .0 .2 .2 .3
.4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .3 .2 .2 .1 .0 .0 -.1 -.1 -.2 -.2 -.2 -.3 -.3 -.3 -.3 -.3 -.2 -.2 -.1 .0 .0 .1 .1 .2 .3 .4
.4 .4 .4 .3 .3 .2 .2 .2 .3 .3 .2 .2 .2 .1 .0 -.1 -.1 -.1 -.1 -.1 -.2 -.3 -.3 -.2 -.2 -.2 -.1 -.1 .0 .1 .1 .2 .3 .3 .2 .2
.2 .3 .3 .1 .1 .1 .0 .0 .1 .1 .1 .1 .0 .0 -.1 -.1 -.2 -.2 .0 .0 -.1 -.2 -.1 -.1 -.1 .0 .0 -.1 .0 .0 .0 .1 .1 .2 .2 .1
-.2 -.1 -.1 -.2 -.1 -.1 -.2 -.1 -.2 -.1 -.2 -.2 -.2 -.2 -.2 -.2 -.3 -.2 -.1 -.1 -.2 -.2 -.1 -.2 -.2 -.1 -.2 -.2 -.2 -.3 -.2 -.2 -.2 -.1 -.1 -.1
-.4 -.4 -.3 -.3 -.2 -.2 -.3 -.4 -.4 -.4 -.5 -.4 -.4 -.3 -.2 -.3 -.3 -.4 -.4 -.4 -.5 -.4 -.4 -.4 -.4 -.4 -.4 -.5 -.6 -.6 -.6 -.5 -.6 -.5 -.5 -.5
-.6 -.6 -.5 -.3 -.3 -.3 -.4 -.5 -.5 -.6 -.6 -.6 -.5 -.4 -.3 -.4 -.4 -.5 -.5 -.7 -.7 -.6 -.8 -.5 -.5 -.5 -.5 -.6 -.7 -.7 -.7 -.6 -.6 -.6 -.6 -.7
-.7 -.6 -.6 -.4 -.4 -.5 -.5 -.6 -.6 -.6 -.7 -.6 -.6 -.5 -.5 -.6 -.6 -.6 -.7 -.7 -.8 -.8 -.7 -.6 -.6 -.6 -.7 -.7 -.7 -.7 -.7 -.6 -.6 -.7 -.7 -.7
-.7 -.6 -.6 -.4 -.4 -.5 -.5 -.6 -.6 -.7 -.7 -.6 -.6 -.6 -.6 -.6 -.6 -.7 -.7 -.6 -.7 -.7 -.7 -.7 -.6 -.7 -.7 -.7 -.7 -.7 -.7 -.7 -.7 -.8 -.7 -.8
-.6 -.5 -.5 -.4 -.4 -.4 -.5 -.6 -.6 -.7 -.7 -.7 -.7 -.6 -.6 -.4 -.5 -.5 -.5 -.7 -.7 -.7 -.7 -.6 -.6 -.6 -.6 -.7 -.8 -.8 -.8 -.8 -.8 -.8 -.7 -.7
-.5 -.4 -.4 -.3 -.4 -.4 -.4 -.4 -.5 -.6 -.6 -.6 -.7 -.6 -.5 -.4 -.4 -.4 -.6 -.7 -.7 -.6 -.6 -.5 -.4 -.4 -.5 -.6 -.7 -.7 -.7 -.7 -.7 -.6 -.5 -.5
-.3 -.3 -.3 -.3 -.3 -.2 -.2 -.2 -.3 -.4 -.4 -.4 -.4 -.3 -.3 -.3 -.2 -.2 -.4 -.5 -.4 -.5 -.4 -.3 -.3 -.3 -.3 -.4 -.4 -.4 -.4 -.5 -.5 -.4 -.4 -.3
-.1 -.1 -.1 -.1 .0 .0 .0 .0 .0 .0 .0 -.1 .0 .0 -.1 .0 .0 .0 .0 .0 .0 .0 .0 .0 .0 .0 .0 -.1 .0 .0 .0 -.1 -.1 -.1 -.1 -.1
.2 .2 .3 .3 .3 .4 .4 .4 .3 .3 .3 .3 .2 .2 .2 .3 .3 .3 .3 .3 .4 .4 .4 .4 .4 .4 .3 .3 .4 .4 .4 .4 .3 .3 .2 .2
.4 .4 .4 .4 .5 .5 .5 .5 .5 .4 .4 .4 .4 .4 .4 .4 .3 .3 .3 .4 .4 .4 .4 .5 .5 .4 .4 .5 .4 .4 .5 .4 .4 .4 .4 .4
.4 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .4 .4 .4 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .4 .4
.7 .7 .8 .8 .8 .8 .8 .8 .8 .8 .8 .8 .8 .8 .8 .8 .8 .8 .8 .8 .8 .8 .8 .8 .8 .8 .8 .8 .8 .8 .8 .8 .8 .7 .7 .7
150°W 120°W 90°W 60°W 30°W C° 30°E 60°E 90°E 120°E 150°E
60°N
30°N
0°
30°S
60°S

Figure 54. ATOVS SD O-B brightness temperature differences (deg C). JANUARY 2006
Channel: AMSUA-9 (100 hPa)
NOAA16, using all observations



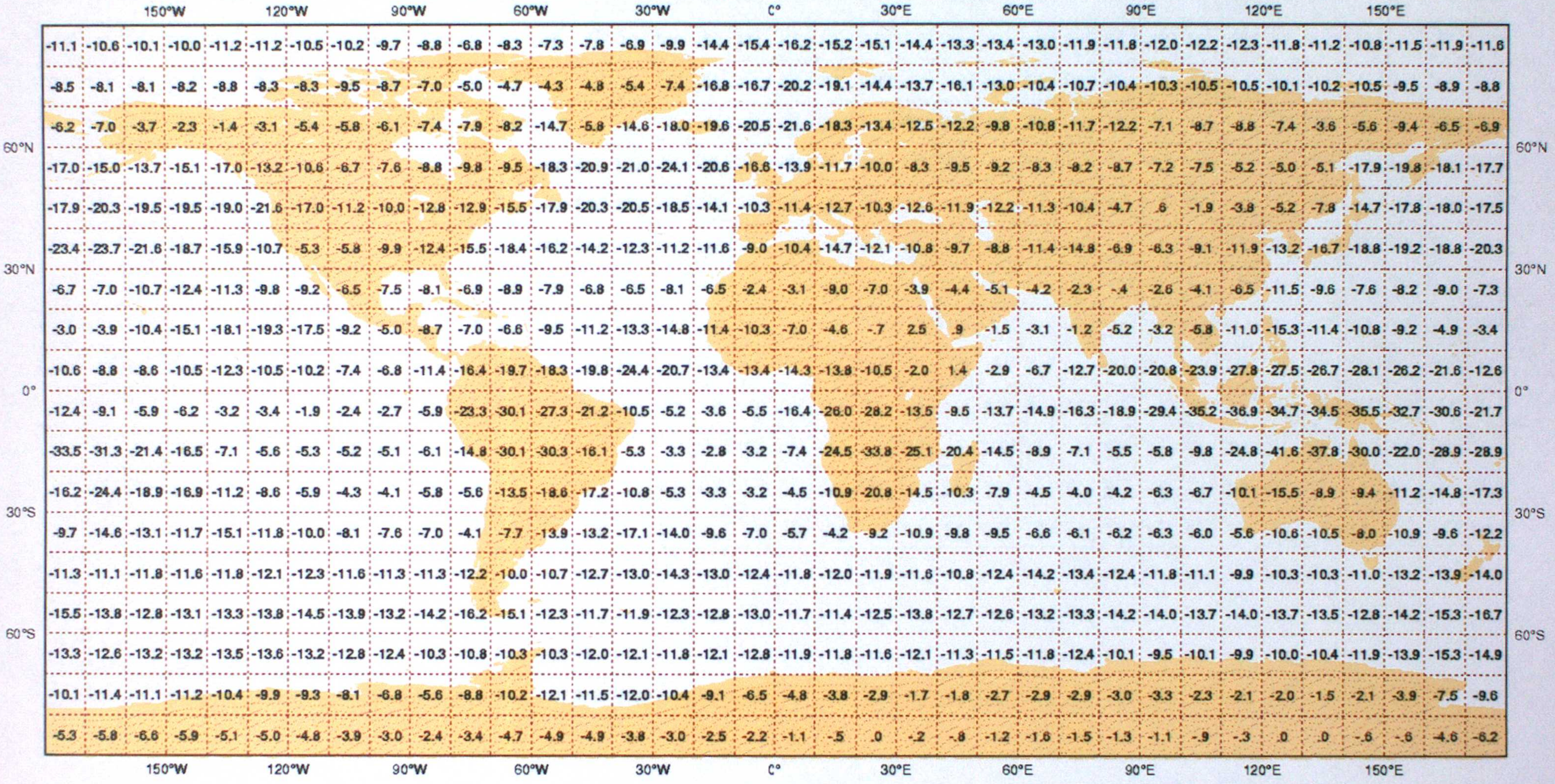
.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.4	.4	.4	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.4	.4	.4	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.4	.4	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.4	.4	.4	.4	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.4	.4	.4	.3	.4	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.4	.3	.3	.3	.3	.3	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.3	.3	.3	.3	.3	.4	.3	.3	.3	.4	.4	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.3	.3	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.4	.3	.4	.3	.3	.3	.3	.3	.3	.4	.3	.3	.4	.3	.3	.3	.3	.4	.4	.3	.3	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.4	.3	.3	.3	.3	.3	.3	.5	.4	.3	.3	.3	.3	.3	.3	.4	.4	.3	.3	.4	.4	.3	.3	.3
.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.4	.3	.3	.3	.3	.3	.3	.4	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.3	.3	.3	.3	.3	.2	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.4	.3	.3	.3	.3	.3	.3	.4	.3	.3	.3	.3	.4	.3	.3	.3	.3	.4	.3	.3	.3	.4	.4	.3	.3	.4	.4	.3	.3	.4	.3	.3	.3	.4	.4
.3	.4	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.3	.3	.3	.3	.3	.3	.3	.4	.4
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2

Figure 55. ATOVS mean daily count. JANUARY 2006
NOAA18, using all observations
Global average number of observations in 24 hours = 634124



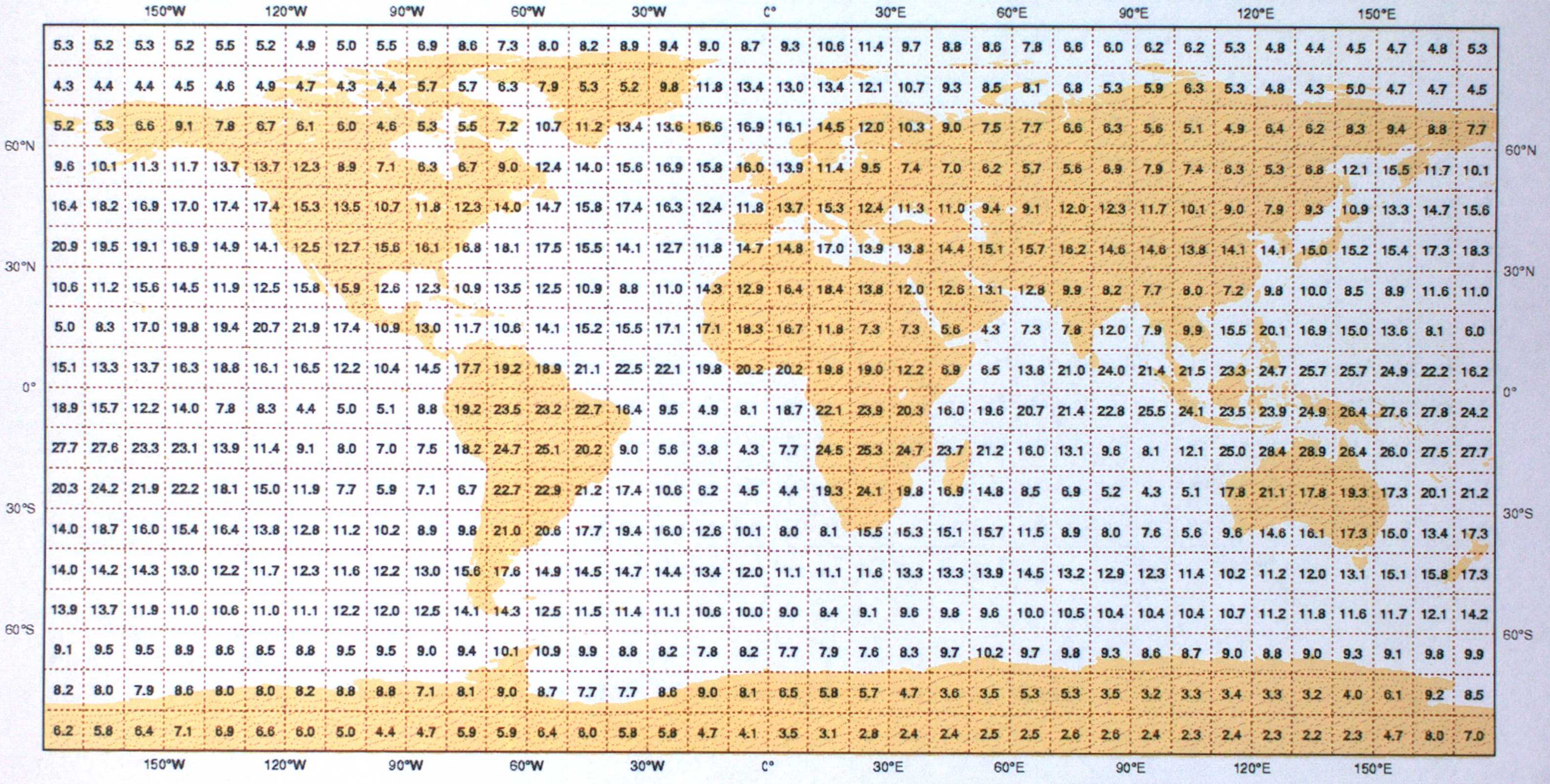
432	435	439	443	443	447	451	450	406	342	293	376	419	398	377	398	427	456	456	456	445	441	435	430	424	418	420	409	414	408	410	412	410	415	425	427
1191	1224	1234	1256	1264	1147	978	1108	985	617	922	1167	1134	756	768	1169	1334	1319	1275	1225	1193	1174	1183	1157	1187	1202	1180	1079	1033	1142	1095	1127	1120	1117	1140	1179
954	979	866	790	830	858	858	891	921	958	941	950	1110	851	1074	1198	1194	1148	1046	989	949	998	1059	1088	1044	1080	1052	853	1045	990	851	610	694	785	574	617
838	983	1052	1091	1069	1019	1024	1044	1081	1073	1053	1096	1107	1105	1108	1120	1111	1062	934	836	874	970	1047	1087	1086	1068	1057	1054	1048	964	1014	956	1005	927	848	805
820	934	1035	1067	1076	1047	1001	1043	1079	1062	1077	1088	1081	1087	1088	1089	1073	1027	856	766	913	1029	1046	1052	1034	1041	1028	943	935	994	1057	1095	1040	912	833	805
1009	1013	1045	1039	1064	1047	995	1018	1057	1081	1086	1080	1084	1072	1063	1094	1056	990	788	762	985	1027	1031	1053	1043	1067	1056	1054	1010	1040	1072	1067	1056	884	778	957
1017	1016	1069	1054	1083	1083	1028	1025	1051	1070	1068	1056	1074	1048	1054	1087	1045	952	712	785	998	997	1027	1011	1053	1111	1072	1040	1050	1075	1112	1093	1080	915	697	888
1036	1015	1075	1051	1051	1074	1062	1050	1013	1060	1058	1031	1068	1061	1051	1059	1014	896	700	890	1055	1025	1005	1017	1026	1047	1062	1032	1059	1079	1094	1093	1075	958	650	846
1015	1024	1064	1053	1053	1086	1094	1053	1006	1067	1063	1085	1102	1071	1059	1056	1024	835	715	965	1050	1045	1062	1042	1035	1066	1068	1030	1063	1089	1085	1087	1065	1013	733	808
1000	1035	1041	1060	1042	1080	1073	1014	1009	1067	1083	1087	1075	1069	1075	1054	1016	757	752	1015	1026	1062	1055	1048	1064	1050	1063	1011	1043	1088	1076	1102	1088	1018	755	754
933	1039	1025	1070	1047	1056	1056	1021	1035	1062	1070	1097	1085	1081	1045	1002	946	700	810	1053	1020	1070	1062	1043	1049	1037	1062	1025	1041	1090	1068	1095	1089	1014	802	691
905	1057	1032	1070	1044	1071	1104	1067	1063	1047	1079	1112	1080	1096	1087	1013	885	698	846	1049	1023	1082	1076	1067	1068	1023	1044	1035	1060	1089	1068	1094	1092	1034	888	697
839	1041	1034	1060	1062	1055	1070	1077	1056	1037	1069	1110	1087	1110	1101	1010	829	735	934	1040	1044	1082	1079	1085	1097	1055	1038	1056	1078	1092	1063	1095	1076	1038	946	727
813	973	1045	1049	1071	1082	1090	1102	1086	1066	1080	1107	1108	1115	1090	960	782	798	981	1071	1081	1091	1099	1110	1103	1071	1058	1079	1107	1107	1107	1104	1089	1094	1025	839
859	906	995	1059	1086	1102	1123	1145	1137	1111	1109	1126	1134	1134	1055	908	820	890	1031	1092	1095	1112	1123	1133	1118	1087	1091	1119	1138	1139	1134	1125	1116	1131	1096	953
1026	988	1020	1074	1126	1165	1194	1220	1220	1214	1196	1174	1153	1099	1035	974	984	1040	1117	1167	1188	1205	1201	1185	1175	1164	1161	1176	1192	1199	1204	1204	1213	1231	1205	1117
1271	1232	1199	1202	1210	1228	1239	1252	1253	1239	1218	1200	1188	1180	1173	1163	1190	1203	1251	1268	1270	1275	1252	1260	1304	1313	1303	1233	1276	1285	1257	1295	1324	1318	1336	1313
449	455	446	435	443	439	436	437	432	431	429	428	427	428	433	438	445	442	446	452	463	468	465	462	458	461	470	477	478	480	481	487	484	483	465	457

Figure 56. ATOVS MEAN O-B brightness temperature differences (deg C). JANUARY 2006
Channel: HIRS8 (Surface)
NOAA18, using all observations



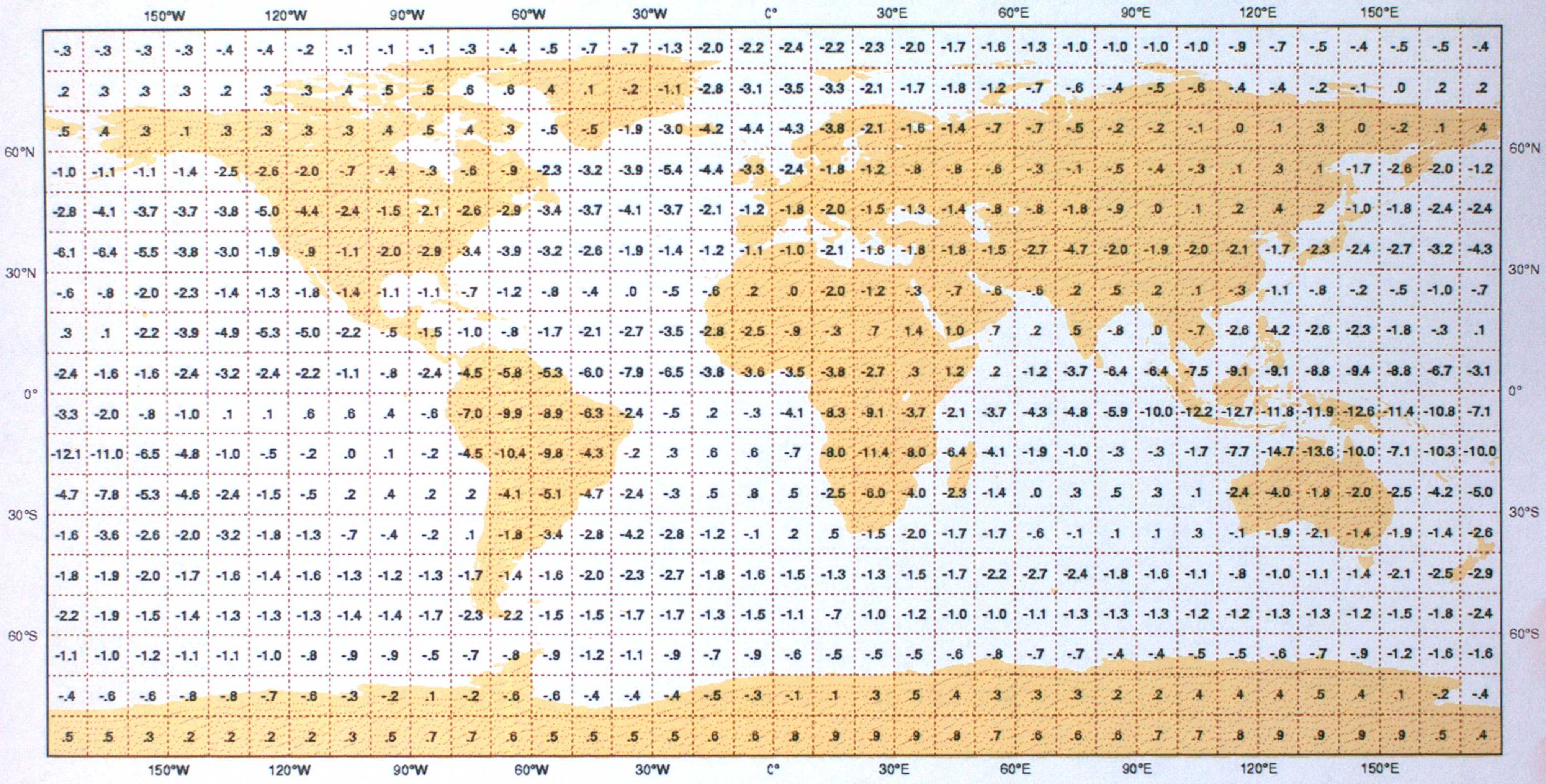
-11.1	-10.6	-10.1	-10.0	-11.2	-11.2	-10.5	-10.2	-9.7	-8.8	-6.8	-8.3	-7.3	-7.8	-6.9	-9.9	-14.4	-15.4	-16.2	-15.2	-15.1	-14.4	-13.3	-13.4	-13.0	-11.9	-11.8	-12.0	-12.2	-12.3	-11.8	-11.2	-10.8	-11.5	-11.9	-11.6
-8.5	-8.1	-8.1	-8.2	-8.8	-8.3	-8.3	-9.5	-8.7	-7.0	-5.0	-4.7	-4.3	-4.8	-5.4	-7.4	-16.8	-16.7	-20.2	-19.1	-14.4	-13.7	-16.1	-13.0	-10.4	-10.7	-10.4	-10.3	-10.5	-10.5	-10.1	-10.2	-10.5	-9.5	-8.9	-8.8
-6.2	-7.0	-3.7	-2.3	-1.4	-3.1	-5.4	-5.8	-6.1	-7.4	-7.9	-8.2	-14.7	-5.8	-14.6	-18.0	-19.6	-20.5	-21.6	-18.3	-13.4	-12.5	-12.2	-9.8	-10.8	-11.7	-12.2	-7.1	-8.7	-8.8	-7.4	-3.6	-5.6	-9.4	-6.5	-6.9
-17.0	-15.0	-13.7	-15.1	-17.0	-13.2	-10.6	-6.7	-7.6	-8.8	-9.8	-9.5	-18.3	-20.9	-21.0	-24.1	-20.6	-16.6	-13.9	-11.7	-10.0	-8.3	-9.5	-9.2	-8.3	-8.2	-8.7	-7.2	-7.5	-5.2	-5.0	-5.1	-17.9	-19.8	-18.1	-17.7
-17.9	-20.3	-19.5	-19.5	-19.0	-21.6	-17.0	-11.2	-10.0	-12.8	-12.9	-15.5	-17.9	-20.3	-20.5	-18.5	-14.1	-10.3	-11.4	-12.7	-10.3	-12.6	-11.9	-12.2	-11.3	-10.4	-4.7	.6	-1.9	-3.8	-5.2	-7.8	-14.7	-17.8	-18.0	-17.5
-23.4	-23.7	-21.6	-18.7	-15.9	-10.7	-5.3	-5.8	-9.9	-12.4	-15.5	-18.4	-16.2	-14.2	-12.3	-11.2	-11.6	-9.0	-10.4	-14.7	-12.1	-10.8	-9.7	-8.8	-11.4	-14.8	-6.9	-6.3	-9.1	-11.9	-13.2	-16.7	-18.8	-19.2	-18.8	-20.3
-6.7	-7.0	-10.7	-12.4	-11.3	-9.8	-9.2	-6.5	-7.5	-8.1	-6.9	-8.9	-7.9	-6.8	-6.5	-8.1	-6.5	-2.4	-3.1	-9.0	-7.0	-3.9	-4.4	-5.1	-4.2	-2.3	-.4	-2.6	-4.1	-6.5	-11.5	-9.6	-7.6	-8.2	-9.0	-7.3
-3.0	-3.9	-10.4	-15.1	-18.1	-19.3	-17.5	-9.2	-5.0	-8.7	-7.0	-6.6	-9.5	-11.2	-13.3	-14.8	-11.4	-10.3	-7.0	-4.6	-.7	2.5	.9	-1.5	-3.1	-1.2	-5.2	-3.2	-5.8	-11.0	-15.3	-11.4	-10.8	-9.2	-4.9	-3.4
-10.6	-8.8	-8.6	-10.5	-12.3	-10.5	-10.2	-7.4	-6.8	-11.4	-16.4	-19.7	-18.3	-19.8	-24.4	-20.7	-13.4	-13.4	-14.3	-13.8	-10.5	-2.0	1.4	-2.9	-6.7	-12.7	-20.0	-20.8	-23.9	-27.8	-27.5	-26.7	-28.1	-26.2	-21.6	-12.6
-12.4	-9.1	-5.9	-6.2	-3.2	-3.4	-1.9	-2.4	-2.7	-5.9	-23.3	-30.1	-27.3	-21.2	-10.5	-5.2	-3.6	-5.5	-16.4	-26.0	-28.2	-13.5	-9.5	-13.7	-14.9	-16.3	-18.9	-29.4	-35.2	-36.9	-34.7	-34.5	-35.5	-32.7	-30.6	-21.7
-33.5	-31.3	-21.4	-16.5	-7.1	-5.6	-5.3	-5.2	-5.1	-6.1	-14.8	-30.1	-30.3	-16.1	-5.3	-3.3	-2.8	-3.2	-7.4	-24.5	-33.8	-25.1	-20.4	-14.5	-8.9	-7.1	-5.5	-5.8	-9.8	-24.8	-41.6	-37.8	-30.0	-22.0	-28.9	-28.9
-16.2	-24.4	-18.9	-16.9	-11.2	-8.6	-5.9	-4.3	-4.1	-5.8	-5.6	-13.5	-18.6	-17.2	-10.8	-5.3	-3.3	-3.2	-4.5	-10.9	-20.8	-14.5	-10.3	-7.9	-4.5	-4.0	-4.2	-6.3	-6.7	-10.1	-15.5	-8.9	-9.4	-11.2	-14.8	-17.3
-9.7	-14.6	-13.1	-11.7	-15.1	-11.8	-10.0	-8.1	-7.6	-7.0	-4.1	-7.7	-13.9	-13.2	-17.1	-14.0	-9.6	-7.0	-5.7	-4.2	-9.2	-10.9	-9.8	-9.5	-6.6	-6.1	-6.2	-6.3	-6.0	-5.6	-10.6	-10.5	-8.0	-10.9	-9.6	-12.2
-11.3	-11.1	-11.8	-11.6	-11.8	-12.1	-12.3	-11.6	-11.3	-11.3	-12.2	-10.0	-10.7	-12.7	-13.0	-14.3	-13.0	-12.4	-11.8	-12.0	-11.9	-11.6	-10.8	-12.4	-14.2	-13.4	-12.4	-11.8	-11.1	-9.9	-10.3	-10.3	-11.0	-13.2	-13.9	-14.0
-15.5	-13.8	-12.8	-13.1	-13.3	-13.8	-14.5	-13.9	-13.2	-14.2	-16.2	-15.1	-12.3	-11.7	-11.9	-12.3	-12.8	-13.0	-11.7	-11.4	-12.5	-13.8	-12.7	-12.6	-13.2	-13.3	-14.2	-14.0	-13.7	-14.0	-13.7	-13.5	-12.8	-14.2	-15.3	-16.7
-13.3	-12.6	-13.2	-13.2	-13.5	-13.6	-13.2	-12.8	-12.4	-10.3	-10.8	-10.3	-10.3	-12.0	-12.1	-11.8	-12.1	-12.8	-11.9	-11.8	-11.6	-12.1	-11.3	-11.5	-11.8	-12.4	-10.1	-9.5	-10.1	-9.9	-10.0	-10.4	-11.9	-13.9	-15.3	-14.9
-10.1	-11.4	-11.1	-11.2	-10.4	-9.9	-9.3	-8.1	-6.8	-5.6	-8.8	-10.2	-12.1	-11.5	-12.0	-10.4	-9.1	-6.5	-4.8	-3.8	-2.9	-1.7	-1.8	-2.7	-2.9	-2.9	-3.0	-3.3	-2.3	-2.1	-2.0	-1.5	-2.1	-3.9	-7.5	-9.6
-5.3	-5.8	-6.6	-5.9	-5.1	-5.0	-4.8	-3.9	-3.0	-2.4	-3.4	-4.7	-4.9	-4.9	-3.8	-3.0	-2.5	-2.2	-1.1	-.5	.0	-.2	-.8	-1.2	-1.6	-1.5	-1.3	-1.1	-.9	-.3	.0	.0	-.6	-.6	-4.6	-6.2

Figure 57. ATOVS SD O-B brightness temperature differences (deg C). JANUARY 2006
Channel: HIRS8 (Surface)
NOAA18, using all observations



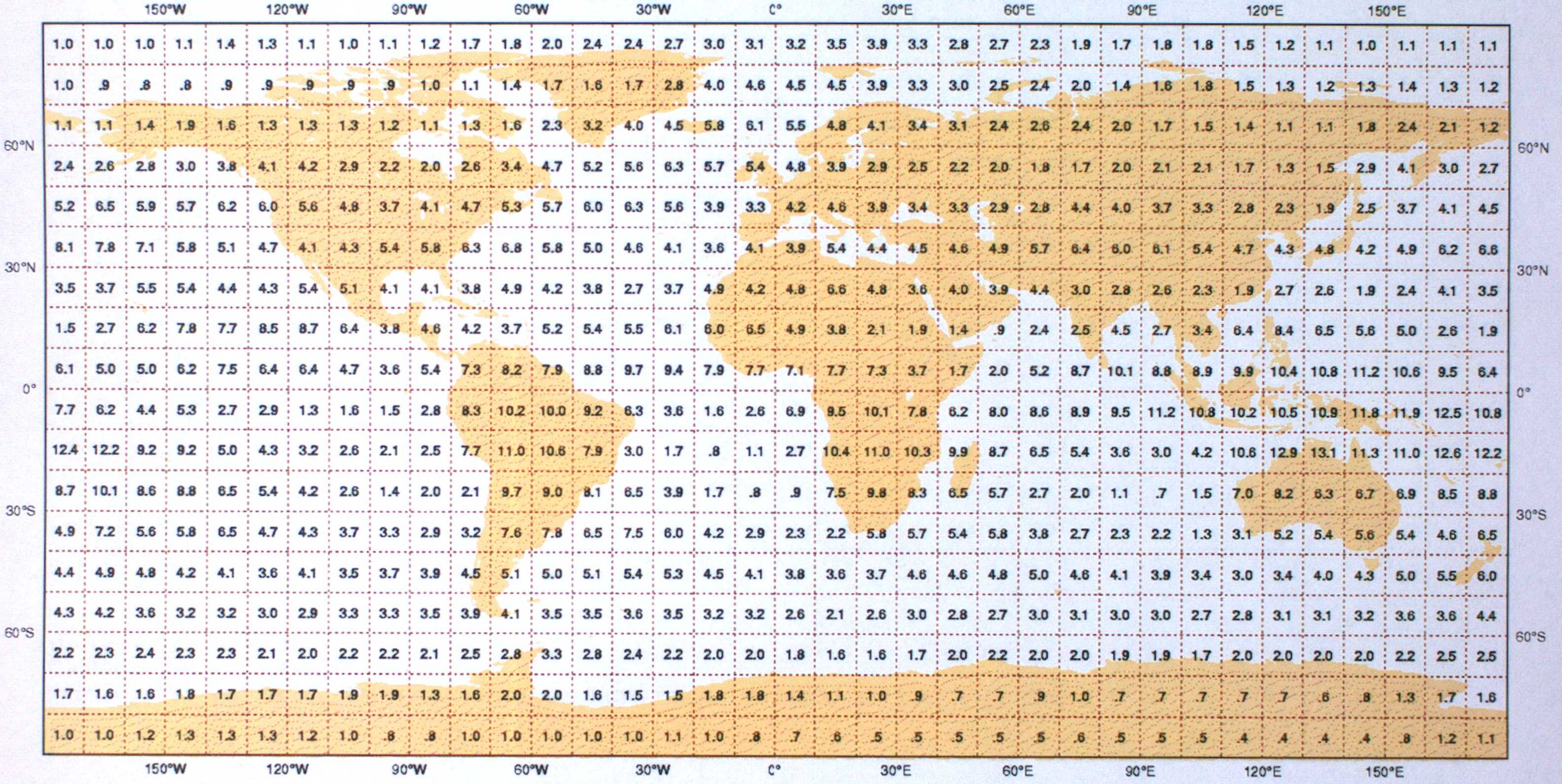
5.3	5.2	5.3	5.2	5.5	5.2	4.9	5.0	5.5	6.9	8.6	7.3	8.0	8.2	8.9	9.4	9.0	8.7	9.3	10.6	11.4	9.7	8.8	8.6	7.8	6.6	6.0	6.2	6.2	5.3	4.8	4.4	4.5	4.7	4.8	5.3
4.3	4.4	4.4	4.5	4.6	4.9	4.7	4.3	4.4	5.7	5.7	6.3	7.9	5.3	5.2	9.8	11.8	13.4	13.0	13.4	12.1	10.7	9.3	8.5	8.1	6.8	5.3	5.9	6.3	5.3	4.8	4.3	5.0	4.7	4.7	4.5
5.2	5.3	6.6	9.1	7.8	6.7	6.1	6.0	4.6	5.3	5.5	7.2	10.7	11.2	13.4	13.6	16.6	16.9	16.1	14.5	12.0	10.3	9.0	7.5	7.7	6.6	6.3	5.6	5.1	4.9	6.4	6.2	8.3	9.4	8.8	7.7
9.6	10.1	11.3	11.7	13.7	13.7	12.3	8.9	7.1	6.3	6.7	9.0	12.4	14.0	15.6	16.9	15.8	16.0	13.9	11.4	9.5	7.4	7.0	6.2	5.7	5.6	6.9	7.9	7.4	6.3	5.3	6.8	12.1	15.5	11.7	10.1
16.4	18.2	16.9	17.0	17.4	17.4	15.3	13.5	10.7	11.8	12.3	14.0	14.7	15.8	17.4	16.3	12.4	11.8	13.7	15.3	12.4	11.3	11.0	9.4	9.1	12.0	12.3	11.7	10.1	9.0	7.9	9.3	10.9	13.3	14.7	15.6
20.9	19.5	19.1	16.9	14.9	14.1	12.5	12.7	15.6	16.1	16.8	18.1	17.5	15.5	14.1	12.7	11.8	14.7	14.8	17.0	13.9	13.8	14.4	15.1	15.7	16.2	14.6	14.6	13.8	14.1	14.1	15.0	15.2	15.4	17.3	18.3
10.6	11.2	15.6	14.5	11.9	12.5	15.8	15.9	12.6	12.3	10.9	13.5	12.5	10.9	8.8	11.0	14.3	12.9	16.4	18.4	13.8	12.0	12.6	13.1	12.8	9.9	8.2	7.7	8.0	7.2	9.8	10.0	8.5	8.9	11.6	11.0
5.0	8.3	17.0	19.8	19.4	20.7	21.9	17.4	10.9	13.0	11.7	10.6	14.1	15.2	15.5	17.1	17.1	18.3	16.7	11.8	7.3	7.3	5.6	4.3	7.3	7.8	12.0	7.9	9.9	15.5	20.1	16.9	15.0	13.6	8.1	6.0
15.1	13.3	13.7	16.3	18.8	16.1	16.5	12.2	10.4	14.5	17.7	19.2	18.9	21.1	22.5	22.1	19.8	20.2	20.2	19.8	19.0	12.2	6.9	6.5	13.8	21.0	24.0	21.4	21.5	23.3	24.7	25.7	25.7	24.9	22.2	16.2
18.9	15.7	12.2	14.0	7.8	8.3	4.4	5.0	5.1	8.8	19.2	23.5	23.2	22.7	16.4	9.5	4.9	8.1	18.7	22.1	23.9	20.3	16.0	19.6	20.7	21.4	22.8	25.5	24.1	23.5	23.9	24.9	26.4	27.6	27.8	24.2
27.7	27.6	23.3	23.1	13.9	11.4	9.1	8.0	7.0	7.5	18.2	24.7	25.1	20.2	9.0	5.6	3.8	4.3	7.7	24.5	25.3	24.7	23.7	21.2	16.0	13.1	9.6	8.1	12.1	25.0	28.4	28.9	26.4	26.0	27.5	27.7
20.3	24.2	21.9	22.2	18.1	15.0	11.9	7.7	5.9	7.1	6.7	22.7	22.9	21.2	17.4	10.6	6.2	4.5	4.4	19.3	24.1	19.8	16.9	14.8	8.5	6.9	5.2	4.3	5.1	17.8	21.1	17.8	19.3	17.3	20.1	21.2
14.0	18.7	16.0	15.4	16.4	13.8	12.8	11.2	10.2	8.9	9.8	21.0	20.6	17.7	19.4	16.0	12.6	10.1	8.0	8.1	15.5	15.3	15.1	15.7	11.5	8.9	8.0	7.6	5.6	9.6	14.6	16.1	17.3	15.0	13.4	17.3
14.0	14.2	14.3	13.0	12.2	11.7	12.3	11.6	12.2	13.0	15.6	17.6	14.9	14.5	14.7	14.4	13.4	12.0	11.1	11.1	11.6	13.3	13.3	13.9	14.5	13.2	12.9	12.3	11.4	10.2	11.2	12.0	13.1	15.1	15.8	17.3
13.9	13.7	11.9	11.0	10.6	11.0	11.1	12.2	12.0	12.5	14.1	14.3	12.5	11.5	11.4	11.1	10.6	10.0	9.0	8.4	9.1	9.6	9.8	9.6	10.0	10.5	10.4	10.4	10.4	10.7	11.2	11.8	11.6	11.7	12.1	14.2
9.1	9.5	9.5	8.9	8.6	8.5	8.8	9.5	9.5	9.0	9.4	10.1	10.9	9.9	8.8	8.2	7.8	8.2	7.7	7.9	7.6	8.3	9.7	10.2	9.7	9.8	9.3	8.6	8.7	9.0	8.8	9.0	9.3	9.1	9.8	9.9
8.2	8.0	7.9	8.6	8.0	8.0	8.2	8.8	8.8	7.1	8.1	9.0	8.7	7.7	7.7	8.6	9.0	8.1	6.5	5.8	5.7	4.7	3.6	3.5	5.3	5.3	3.5	3.2	3.3	3.4	3.3	3.2	4.0	6.1	9.2	8.5
6.2	5.8	6.4	7.1	6.9	6.6	6.0	5.0	4.4	4.7	5.9	5.9	6.4	6.0	5.8	5.8	4.7	4.1	3.5	3.1	2.8	2.4	2.4	2.5	2.5	2.6	2.6	2.4	2.3	2.4	2.3	2.2	2.3	4.7	8.0	7.0

Figure 58. ATOVS MEAN O-B brightness temperature differences (deg C). JANUARY 2006
Channel: HIRS15 (700 hPa)
NOAA18, using all observations



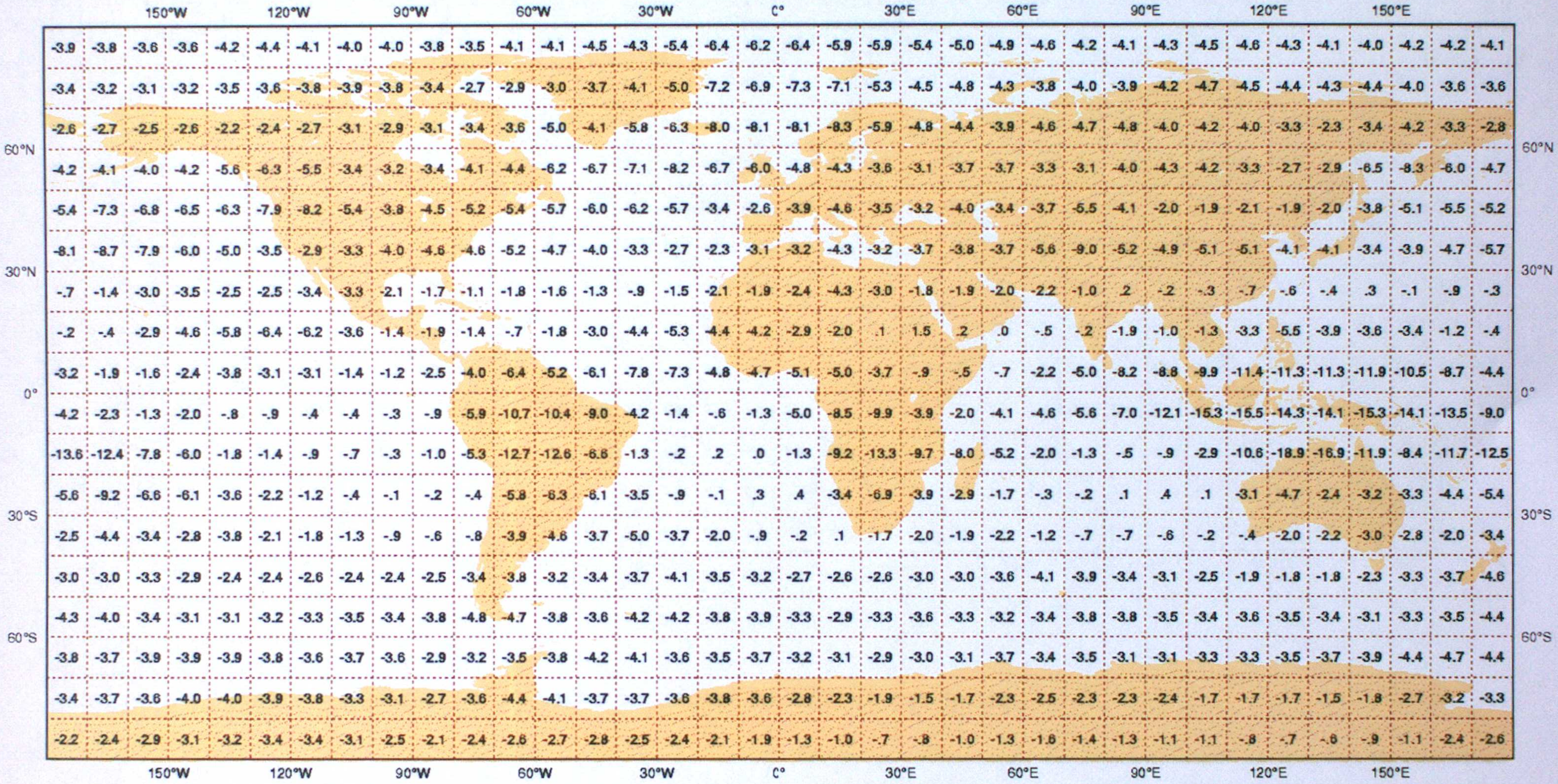
-.3	-.3	-.3	-.3	-.4	-.4	-.2	-.1	-.1	-.1	-.3	-.4	-.5	-.7	-.7	-1.3	-2.0	-2.2	-2.4	-2.2	-2.3	-2.0	-1.7	-1.6	-1.3	-1.0	-1.0	-1.0	-1.0	-.9	-.7	-.5	-.4	-.5	-.5	-.4
.2	.3	.3	.3	.2	.3	.3	.4	.5	.5	.6	.6	.4	.1	-.2	-1.1	-2.8	-3.1	-3.5	-3.3	-2.1	-1.7	-1.8	-1.2	-.7	-.6	-.4	-.5	-.6	-.4	-.4	-.2	-.1	.0	.2	.2
.5	.4	.3	.1	.3	.3	.3	.3	.4	.5	.4	.3	-.5	-.5	-1.9	-3.0	-4.2	-4.4	-4.3	-3.8	-2.1	-1.6	-1.4	-.7	-.7	-.5	-.2	-.2	-.1	.0	.1	.3	.0	-.2	.1	.4
-1.0	-1.1	-1.1	-1.4	-2.5	-2.6	-2.0	-.7	-.4	-.3	-.6	-.9	-2.3	-3.2	-3.9	-5.4	-4.4	-3.3	-2.4	-1.8	-1.2	-.8	-.8	-.6	-.3	-.1	-.5	-.4	-.3	.1	.3	.1	-1.7	-2.6	-2.0	-1.2
-2.8	-4.1	-3.7	-3.7	-3.8	-5.0	-4.4	-2.4	-1.5	-2.1	-2.6	-2.9	-3.4	-3.7	-4.1	-3.7	-2.1	-1.2	-1.8	-2.0	-1.5	-1.3	-1.4	-.8	-.8	-1.8	-.9	.0	.1	.2	.4	.2	-1.0	-1.8	-2.4	-2.4
-6.1	-6.4	-5.5	-3.8	-3.0	-1.9	-.9	-1.1	-2.0	-2.9	-3.4	-3.9	-3.2	-2.6	-1.9	-1.4	-1.2	-1.1	-1.0	-2.1	-1.6	-1.8	-1.8	-1.5	-2.7	-4.7	-2.0	-1.9	-2.0	-2.1	-1.7	-2.3	-2.4	-2.7	-3.2	-4.3
-.6	-.8	-2.0	-2.3	-1.4	-1.3	-1.8	-1.4	-1.1	-1.1	-.7	-1.2	-.8	-.4	.0	-.5	-.6	.2	.0	-2.0	-1.2	-.3	-.7	-.6	-.6	.2	.5	.2	.1	-.3	-1.1	-.8	-.2	-.5	-1.0	-.7
.3	.1	-2.2	-3.9	-4.9	-5.3	-5.0	-2.2	-.5	-1.5	-1.0	-.8	-1.7	-2.1	-2.7	-3.5	-2.8	-2.5	-.9	-.3	.7	1.4	1.0	.7	.2	.5	-.8	.0	-.7	-2.6	-4.2	-2.6	-2.3	-1.8	-.3	.1
-2.4	-1.6	-1.6	-2.4	-3.2	-2.4	-2.2	-1.1	-.8	-2.4	-4.5	-5.8	-5.3	-6.0	-7.9	-6.5	-3.8	-3.6	-3.5	-3.8	-2.7	.3	1.2	.2	-1.2	-3.7	-6.4	-6.4	-7.5	-9.1	-9.1	-8.8	-9.4	-8.8	-6.7	-3.1
-3.3	-2.0	-.8	-1.0	.1	.1	.6	.6	.4	-.6	-7.0	-9.9	-8.9	-6.3	-2.4	-.5	.2	-.3	-4.1	-8.3	-9.1	-3.7	-2.1	-3.7	-4.3	-4.8	-5.9	-10.0	-12.2	-12.7	-11.8	-11.9	-12.6	-11.4	-10.8	-7.1
-12.1	-11.0	-6.5	-4.8	-1.0	-.5	-.2	.0	.1	-.2	-4.5	-10.4	-9.8	-4.3	-.2	.3	.6	.6	-.7	-8.0	-11.4	-8.0	-6.4	-4.1	-1.9	-1.0	-.3	-.3	-1.7	-7.7	-14.7	-13.6	-10.0	-7.1	-10.3	-10.0
-4.7	-7.8	-5.3	-4.6	-2.4	-1.5	-.5	.2	.4	.2	.2	-4.1	-5.1	-4.7	-2.4	-.3	.5	.8	.5	-2.5	-6.0	-4.0	-2.3	-1.4	.0	.3	.5	.3	.1	-2.4	-4.0	-1.8	-2.0	-2.5	-4.2	-5.0
-1.6	-3.6	-2.6	-2.0	-3.2	-1.8	-1.3	-.7	-.4	-.2	.1	-1.8	-3.4	-2.8	-4.2	-2.8	-1.2	-.1	.2	.5	-1.5	-2.0	-1.7	-1.7	-.6	-.1	.1	.1	.3	-.1	-1.9	-2.1	-1.4	-1.9	-1.4	-2.6
-1.8	-1.9	-2.0	-1.7	-1.6	-1.4	-1.6	-1.3	-1.2	-1.3	-1.7	-1.4	-1.6	-2.0	-2.3	-2.7	-1.8	-1.6	-1.5	-1.3	-1.3	-1.5	-1.7	-2.2	-2.7	-2.4	-1.8	-1.6	-1.1	-.8	-1.0	-1.1	-1.4	-2.1	-2.5	-2.9
-2.2	-1.9	-1.5	-1.4	-1.3	-1.3	-1.3	-1.4	-1.4	-1.7	-2.3	-2.2	-1.5	-1.5	-1.7	-1.7	-1.3	-1.5	-1.1	-.7	-1.0	-1.2	-1.0	-1.0	-1.1	-1.3	-1.3	-1.3	-1.2	-1.2	-1.3	-1.3	-1.2	-1.5	-1.8	-2.4
-1.1	-1.0	-1.2	-1.1	-1.1	-1.0	-.8	-.9	-.9	-.5	-.7	-.8	-.9	-1.2	-1.1	-.9	-.7	-.9	-.6	-.5	-.5	-.5	-.6	-.8	-.7	-.7	-.4	-.4	-.5	-.5	-.6	-.7	-.9	-1.2	-1.6	-1.6
-.4	-.6	-.6	-.8	-.8	-.7	-.6	-.3	-.2	.1	-.2	-.6	-.6	-.4	-.4	-.4	-.5	-.3	-.1	.1	.3	.5	.4	.3	.3	.3	.2	.2	.4	.4	.4	.5	.4	.1	-.2	-.4
.5	.5	.3	.2	.2	.2	.2	.3	.5	.7	.7	.6	.5	.5	.5	.5	.6	.6	.8	.9	.9	.9	.8	.7	.6	.6	.6	.7	.7	.8	.9	.9	.9	.9	.5	.4

Figure 59. ATOVS SD O-B brightness temperature differences (deg C). JANUARY 2006
Channel: HIRS15 (700 hPa)
NOAA18, using all observations



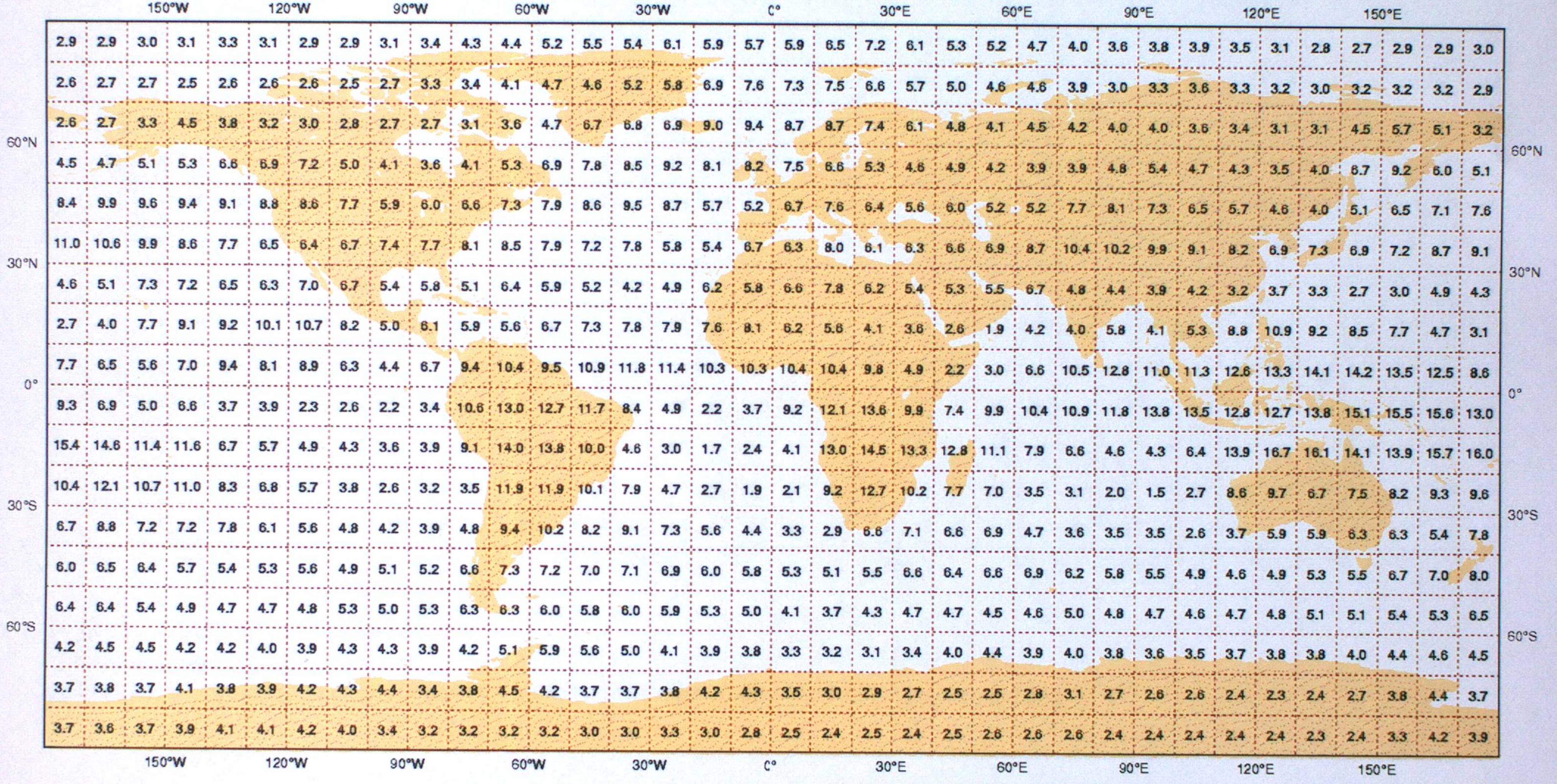
1.0	1.0	1.0	1.1	1.4	1.3	1.1	1.0	1.1	1.2	1.7	1.8	2.0	2.4	2.4	2.7	3.0	3.1	3.2	3.5	3.9	3.3	2.8	2.7	2.3	1.9	1.7	1.8	1.8	1.5	1.2	1.1	1.0	1.1	1.1	1.1
1.0	.9	.8	.8	.9	.9	.9	.9	.9	1.0	1.1	1.4	1.7	1.6	1.7	2.8	4.0	4.6	4.5	4.5	3.9	3.3	3.0	2.5	2.4	2.0	1.4	1.6	1.8	1.5	1.3	1.2	1.3	1.4	1.3	1.2
1.1	1.1	1.4	1.9	1.6	1.3	1.3	1.3	1.2	1.1	1.3	1.6	2.3	3.2	4.0	4.5	5.8	6.1	5.5	4.8	4.1	3.4	3.1	2.4	2.6	2.4	2.0	1.7	1.5	1.4	1.1	1.1	1.8	2.4	2.1	1.2
2.4	2.6	2.8	3.0	3.8	4.1	4.2	2.9	2.2	2.0	2.6	3.4	4.7	5.2	5.6	6.3	5.7	5.4	4.8	3.9	2.9	2.5	2.2	2.0	1.8	1.7	2.0	2.1	2.1	1.7	1.3	1.5	2.9	4.1	3.0	2.7
5.2	6.5	5.9	5.7	6.2	6.0	5.6	4.8	3.7	4.1	4.7	5.3	5.7	6.0	6.3	5.6	3.9	3.3	4.2	4.6	3.9	3.4	3.3	2.9	2.8	4.4	4.0	3.7	3.3	2.8	2.3	1.9	2.5	3.7	4.1	4.5
8.1	7.8	7.1	5.8	5.1	4.7	4.1	4.3	5.4	5.8	6.3	6.8	5.8	5.0	4.6	4.1	3.6	4.1	3.9	5.4	4.4	4.5	4.6	4.9	5.7	6.4	6.0	6.1	5.4	4.7	4.3	4.8	4.2	4.9	6.2	6.6
3.5	3.7	5.5	5.4	4.4	4.3	5.4	5.1	4.1	4.1	3.8	4.9	4.2	3.8	2.7	3.7	4.9	4.2	4.8	6.6	4.8	3.6	4.0	3.9	4.4	3.0	2.8	2.6	2.3	1.9	2.7	2.6	1.9	2.4	4.1	3.5
1.5	2.7	6.2	7.8	7.7	8.5	8.7	6.4	3.8	4.6	4.2	3.7	5.2	5.4	5.5	6.1	6.0	6.5	4.9	3.8	2.1	1.9	1.4	.9	2.4	2.5	4.5	2.7	3.4	6.4	8.4	6.5	5.6	5.0	2.6	1.9
6.1	5.0	5.0	6.2	7.5	6.4	6.4	4.7	3.6	5.4	7.3	8.2	7.9	8.8	9.7	9.4	7.9	7.7	7.1	7.7	7.3	3.7	1.7	2.0	5.2	8.7	10.1	8.8	8.9	9.9	10.4	10.8	11.2	10.6	9.5	6.4
7.7	6.2	4.4	5.3	2.7	2.9	1.3	1.6	1.5	2.8	8.3	10.2	10.0	9.2	6.3	3.6	1.6	2.6	6.9	9.5	10.1	7.8	6.2	8.0	8.6	8.9	9.5	11.2	10.8	10.2	10.5	10.9	11.8	11.9	12.5	10.8
12.4	12.2	9.2	9.2	5.0	4.3	3.2	2.6	2.1	2.5	7.7	11.0	10.6	7.9	3.0	1.7	.8	1.1	2.7	10.4	11.0	10.3	9.9	8.7	6.5	5.4	3.6	3.0	4.2	10.6	12.9	13.1	11.3	11.0	12.6	12.2
8.7	10.1	8.6	8.8	6.5	5.4	4.2	2.6	1.4	2.0	2.1	9.7	9.0	8.1	6.5	3.9	1.7	.8	.9	7.5	9.8	8.3	6.5	5.7	2.7	2.0	1.1	.7	1.5	7.0	8.2	6.3	6.7	6.9	8.5	8.8
4.9	7.2	5.6	5.8	6.5	4.7	4.3	3.7	3.3	2.9	3.2	7.6	7.8	6.5	7.5	6.0	4.2	2.9	2.3	2.2	5.8	5.7	5.4	5.8	3.8	2.7	2.3	2.2	1.3	3.1	5.2	5.4	5.6	5.4	4.6	6.5
4.4	4.9	4.8	4.2	4.1	3.6	4.1	3.5	3.7	3.9	4.5	5.1	5.0	5.1	5.4	5.3	4.5	4.1	3.8	3.6	3.7	4.6	4.6	4.8	5.0	4.6	4.1	3.9	3.4	3.0	3.4	4.0	4.3	5.0	5.5	6.0
4.3	4.2	3.6	3.2	3.2	3.0	2.9	3.3	3.3	3.5	3.9	4.1	3.5	3.5	3.6	3.5	3.2	3.2	2.6	2.1	2.6	3.0	2.8	2.7	3.0	3.1	3.0	3.0	2.7	2.8	3.1	3.1	3.2	3.6	3.6	4.4
2.2	2.3	2.4	2.3	2.3	2.1	2.0	2.2	2.2	2.1	2.5	2.8	3.3	2.8	2.4	2.2	2.0	2.0	1.8	1.6	1.6	1.7	2.0	2.2	2.0	2.0	1.9	1.9	1.7	2.0	2.0	2.0	2.0	2.2	2.5	2.5
1.7	1.6	1.6	1.8	1.7	1.7	1.7	1.9	1.9	1.3	1.6	2.0	2.0	1.6	1.5	1.5	1.8	1.8	1.4	1.1	1.0	.9	.7	.7	.9	1.0	.7	.7	.7	.7	.7	.6	.8	1.3	1.7	1.6
1.0	1.0	1.2	1.3	1.3	1.3	1.2	1.0	.8	.8	1.0	1.0	1.0	1.0	1.0	1.1	1.0	.8	.7	.6	.5	.5	.5	.5	.5	.6	.5	.5	.5	.4	.4	.4	.4	.8	1.2	1.1

Figure 60. ATOVS MEAN O-B brightness temperature differences (deg C). JANUARY 2006
Channel: HIRS11 (500 - 700 hPa)
NOAA18, using all observations



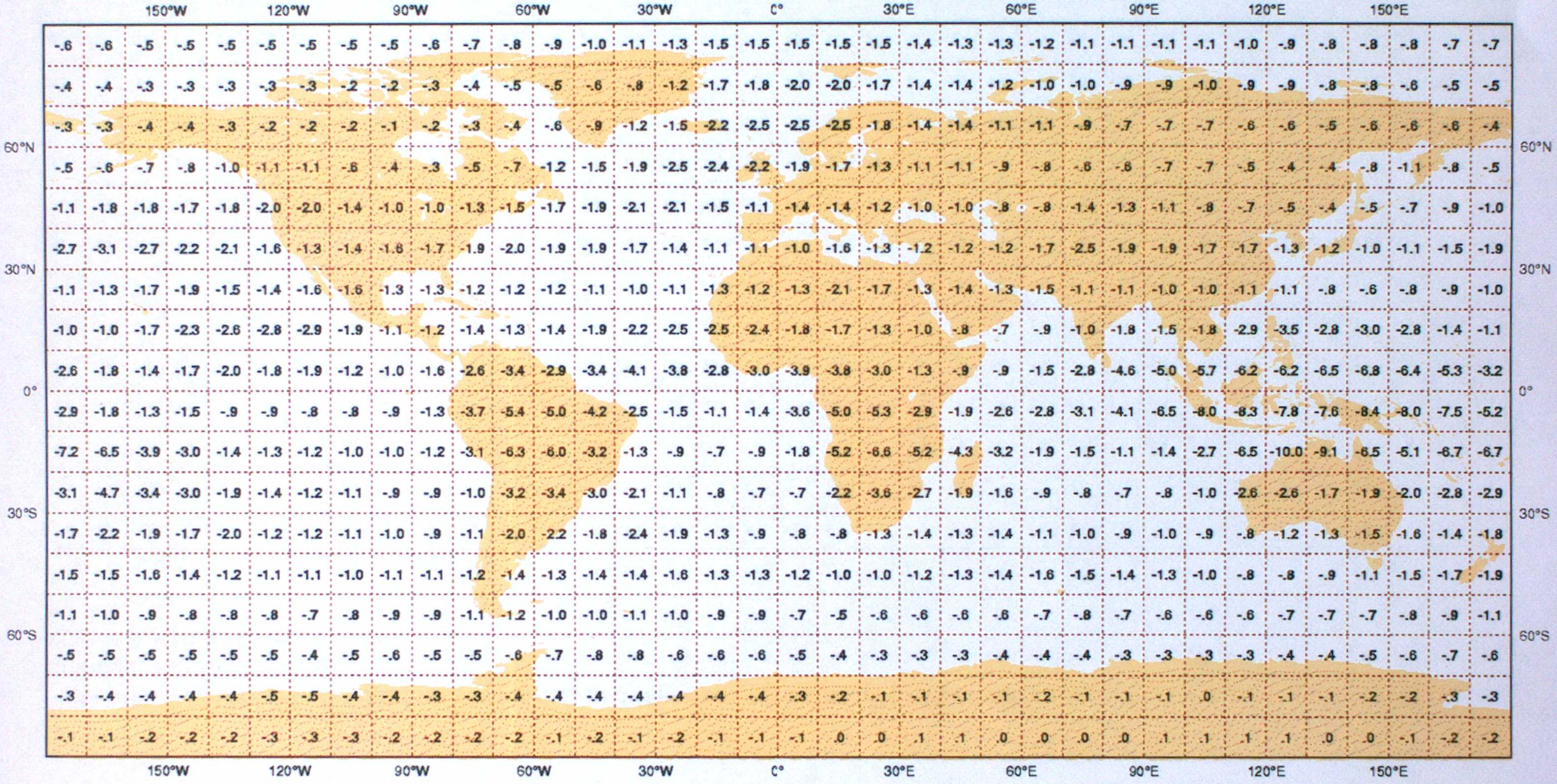
-3.9	-3.8	-3.6	-3.6	-4.2	-4.4	-4.1	-4.0	-4.0	-3.8	-3.5	-4.1	-4.1	-4.5	-4.3	-5.4	-6.4	-6.2	-6.4	-5.9	-5.9	-5.4	-5.0	-4.9	-4.6	-4.2	-4.1	-4.3	-4.5	-4.6	-4.3	-4.1	-4.0	-4.2	-4.2	-4.1
-3.4	-3.2	-3.1	-3.2	-3.5	-3.6	-3.8	-3.9	-3.8	-3.4	-2.7	-2.9	-3.0	-3.7	-4.1	-5.0	-7.2	-6.9	-7.3	-7.1	-5.3	-4.5	-4.8	-4.3	-3.8	-4.0	-3.9	-4.2	-4.7	-4.5	-4.4	-4.3	-4.4	-4.0	-3.6	-3.6
-2.6	-2.7	-2.5	-2.6	-2.2	-2.4	-2.7	-3.1	-2.9	-3.1	-3.4	-3.6	-5.0	-4.1	-5.8	-6.3	-8.0	-8.1	-8.1	-8.3	-5.9	-4.8	-4.4	-3.9	-4.6	-4.7	-4.8	-4.0	-4.2	-4.0	-3.3	-2.3	-3.4	-4.2	-3.3	-2.8
-4.2	-4.1	-4.0	-4.2	-5.6	-6.3	-5.5	-3.4	-3.2	-3.4	-4.1	-4.4	-6.2	-6.7	-7.1	-8.2	-6.7	-6.0	-4.8	-4.3	-3.6	-3.1	-3.7	-3.7	-3.3	-3.1	-4.0	-4.3	-4.2	-3.3	-2.7	-2.9	-6.5	-8.3	-6.0	-4.7
-5.4	-7.3	-6.8	-6.5	-6.3	-7.9	-8.2	-5.4	-3.8	-4.5	-5.2	-5.4	-5.7	-6.0	-6.2	-5.7	-3.4	-2.6	-3.9	-4.6	-3.5	-3.2	-4.0	-3.4	-3.7	-5.5	-4.1	-2.0	-1.9	-2.1	-1.9	-2.0	-3.8	-5.1	-5.5	-5.2
-8.1	-8.7	-7.9	-6.0	-5.0	-3.5	-2.9	-3.3	-4.0	-4.6	-4.6	-5.2	-4.7	-4.0	-3.3	-2.7	-2.3	-3.1	-3.2	-4.3	-3.2	-3.7	-3.8	-3.7	-5.6	-9.0	-5.2	-4.9	-5.1	-5.1	-4.1	-4.1	-3.4	-3.9	-4.7	-5.7
-.7	-1.4	-3.0	-3.5	-2.5	-2.5	-3.4	-3.3	-2.1	-1.7	-1.1	-1.8	-1.6	-1.3	-.9	-1.5	-2.1	-1.9	-2.4	-4.3	-3.0	-1.8	-1.9	-2.0	-2.2	-1.0	.2	-.2	-.3	-.7	-.6	-.4	.3	-.1	-.9	-.3
-.2	-.4	-2.9	-4.6	-5.8	-6.4	-6.2	-3.6	-1.4	-1.9	-1.4	-.7	-1.8	-3.0	-4.4	-5.3	-4.4	-4.2	-2.9	-2.0	.1	1.5	.2	.0	-.5	-.2	-1.9	-1.0	-1.3	-3.3	-5.5	-3.9	-3.6	-3.4	-1.2	-.4
-3.2	-1.9	-1.6	-2.4	-3.8	-3.1	-3.1	-1.4	-1.2	-2.5	-4.0	-6.4	-5.2	-6.1	-7.8	-7.3	-4.8	-4.7	-5.1	-5.0	-3.7	-.9	-.5	-.7	-2.2	-5.0	-8.2	-8.8	-9.9	-11.4	-11.3	-11.3	-11.9	-10.5	-8.7	-4.4
-4.2	-2.3	-1.3	-2.0	-.8	-.9	-.4	-.4	-.3	-.9	-5.9	-10.7	-10.4	-9.0	-4.2	-1.4	-.6	-1.3	-5.0	-8.5	-9.9	-3.9	-2.0	-4.1	-4.6	-5.6	-7.0	-12.1	-15.3	-15.5	-14.3	-14.1	-15.3	-14.1	-13.5	-9.0
-13.6	-12.4	-7.8	-6.0	-1.8	-1.4	-.9	-.7	-.3	-1.0	-5.3	-12.7	-12.6	-6.6	-1.3	-.2	.2	.0	-1.3	-9.2	-13.3	-9.7	-8.0	-5.2	-2.0	-1.3	-.5	-.9	-2.9	-10.6	-18.9	-16.9	-11.9	-8.4	-11.7	-12.5
-5.6	-9.2	-6.6	-6.1	-3.6	-2.2	-1.2	-.4	-.1	-.2	-.4	-5.8	-6.3	-6.1	-3.5	-.9	-.1	.3	.4	-3.4	-6.9	-3.9	-2.9	-1.7	-.3	-.2	.1	.4	.1	-3.1	-4.7	-2.4	-3.2	-3.3	-4.4	-5.4
-2.5	-4.4	-3.4	-2.8	-3.8	-2.1	-1.8	-1.3	-.9	-.6	-.8	-3.9	-4.6	-3.7	-5.0	-3.7	-2.0	-.9	-.2	.1	-1.7	-2.0	-1.9	-2.2	-1.2	-.7	-.7	-.6	-.2	-.4	-2.0	-2.2	-3.0	-2.8	-2.0	-3.4
-3.0	-3.0	-3.3	-2.9	-2.4	-2.4	-2.6	-2.4	-2.4	-2.5	-3.4	-3.8	-3.2	-3.4	-3.7	-4.1	-3.5	-3.2	-2.7	-2.6	-2.6	-3.0	-3.0	-3.6	-4.1	-3.9	-3.4	-3.1	-2.5	-1.9	-1.8	-1.8	-2.3	-3.3	-3.7	-4.6
-4.3	-4.0	-3.4	-3.1	-3.1	-3.2	-3.3	-3.5	-3.4	-3.8	-4.8	-4.7	-3.8	-3.6	-4.2	-4.2	-3.8	-3.9	-3.3	-2.9	-3.3	-3.6	-3.3	-3.2	-3.4	-3.8	-3.8	-3.5	-3.4	-3.6	-3.5	-3.4	-3.1	-3.3	-3.5	-4.4
-3.8	-3.7	-3.9	-3.9	-3.9	-3.8	-3.6	-3.7	-3.6	-2.9	-3.2	-3.5	-3.8	-4.2	-4.1	-3.6	-3.5	-3.7	-3.2	-3.1	-2.9	-3.0	-3.1	-3.7	-3.4	-3.5	-3.1	-3.1	-3.3	-3.3	-3.5	-3.7	-3.9	-4.4	-4.7	-4.4
-3.4	-3.7	-3.6	-4.0	-4.0	-3.9	-3.8	-3.3	-3.1	-2.7	-3.6	-4.4	-4.1	-3.7	-3.7	-3.6	-3.8	-3.6	-2.8	-2.3	-1.9	-1.5	-1.7	-2.3	-2.5	-2.3	-2.3	-2.4	-1.7	-1.7	-1.7	-1.5	-1.8	-2.7	-3.2	-3.3
-2.2	-2.4	-2.9	-3.1	-3.2	-3.4	-3.4	-3.1	-2.5	-2.1	-2.4	-2.6	-2.7	-2.8	-2.5	-2.4	-2.1	-1.9	-1.3	-1.0	-.7	-.8	-1.0	-1.3	-1.6	-1.4	-1.3	-1.1	-1.1	-.8	-.7	-.6	-.9	-1.1	-2.4	-2.6

Figure 61. ATOVS SD O-B brightness temperature differences (deg C). JANUARY 2006
Channel: HIRS11 (500 - 700 hPa)
NOAA18, using all observations



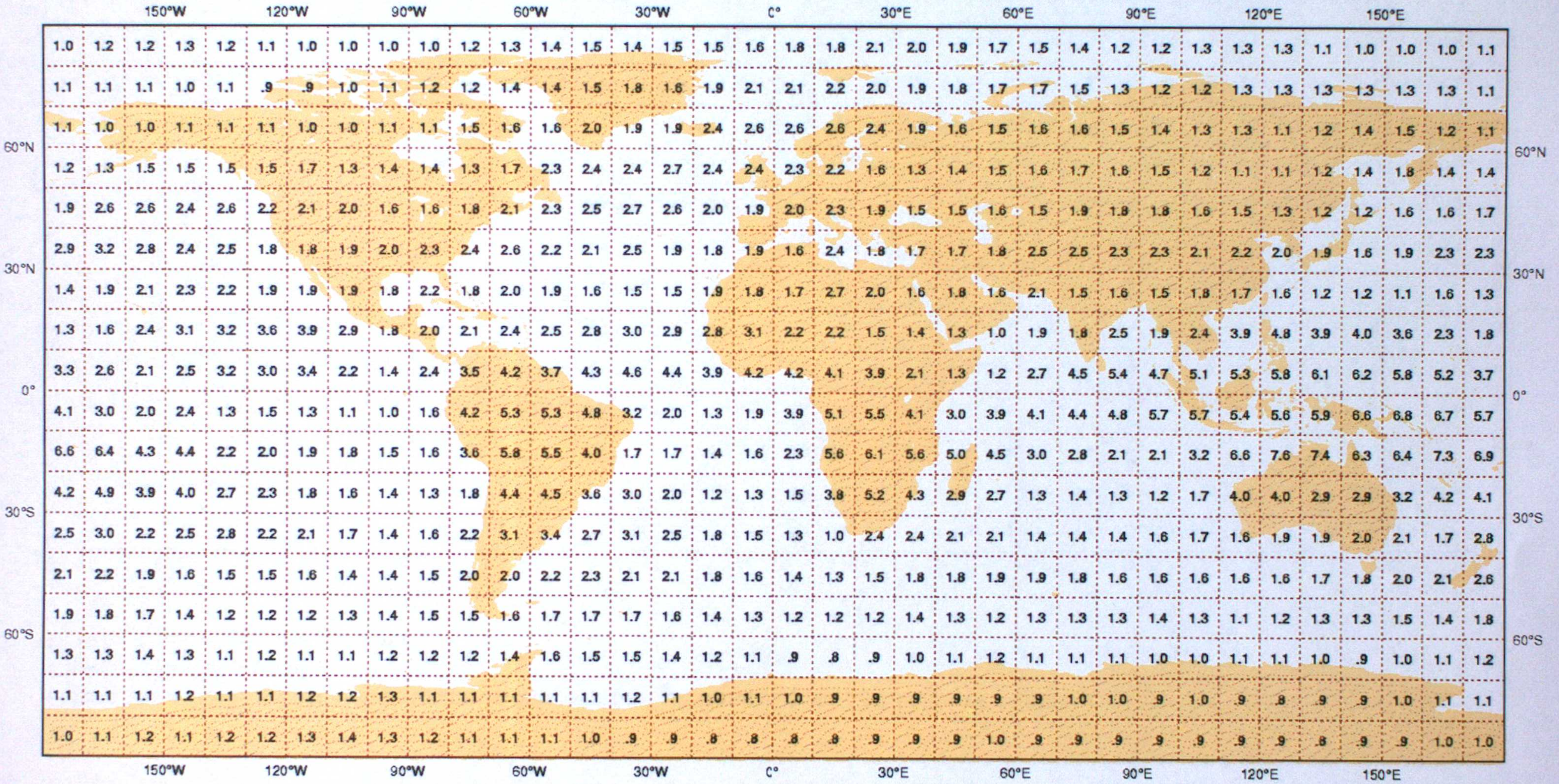
2.9	2.9	3.0	3.1	3.3	3.1	2.9	2.9	3.1	3.4	4.3	4.4	5.2	5.5	5.4	6.1	5.9	5.7	5.9	6.5	7.2	6.1	5.3	5.2	4.7	4.0	3.6	3.8	3.9	3.5	3.1	2.8	2.7	2.9	2.9	3.0
2.6	2.7	2.7	2.5	2.6	2.6	2.6	2.5	2.7	3.3	3.4	4.1	4.7	4.6	5.2	5.8	6.9	7.6	7.3	7.5	6.6	5.7	5.0	4.6	4.6	3.9	3.0	3.3	3.6	3.3	3.2	3.0	3.2	3.2	3.2	2.9
2.6	2.7	3.3	4.5	3.8	3.2	3.0	2.8	2.7	2.7	3.1	3.6	4.7	6.7	6.8	6.9	9.0	9.4	8.7	8.7	7.4	6.1	4.8	4.1	4.5	4.2	4.0	4.0	3.6	3.4	3.1	3.1	4.5	5.7	5.1	3.2
4.5	4.7	5.1	5.3	6.6	6.9	7.2	5.0	4.1	3.6	4.1	5.3	6.9	7.8	8.5	9.2	8.1	8.2	7.5	6.6	5.3	4.6	4.9	4.2	3.9	3.9	4.8	5.4	4.7	4.3	3.5	4.0	6.7	9.2	6.0	5.1
8.4	9.9	9.6	9.4	9.1	8.8	8.6	7.7	5.9	6.0	6.6	7.3	7.9	8.6	9.5	8.7	5.7	5.2	6.7	7.6	6.4	5.6	6.0	5.2	5.2	7.7	8.1	7.3	6.5	5.7	4.6	4.0	5.1	6.5	7.1	7.6
11.0	10.6	9.9	8.6	7.7	6.5	6.4	6.7	7.4	7.7	8.1	8.5	7.9	7.2	7.8	5.8	5.4	6.7	6.3	8.0	6.1	6.3	6.6	6.9	8.7	10.4	10.2	9.9	9.1	8.2	6.9	7.3	6.9	7.2	8.7	9.1
4.6	5.1	7.3	7.2	6.5	6.3	7.0	6.7	5.4	5.8	5.1	6.4	5.9	5.2	4.2	4.9	6.2	5.8	6.6	7.8	6.2	5.4	5.3	5.5	6.7	4.8	4.4	3.9	4.2	3.2	3.7	3.3	2.7	3.0	4.9	4.3
2.7	4.0	7.7	9.1	9.2	10.1	10.7	8.2	5.0	6.1	5.9	5.6	6.7	7.3	7.8	7.9	7.6	8.1	6.2	5.6	4.1	3.6	2.6	1.9	4.2	4.0	5.8	4.1	5.3	8.8	10.9	9.2	8.5	7.7	4.7	3.1
7.7	6.5	5.6	7.0	9.4	8.1	8.9	6.3	4.4	6.7	9.4	10.4	9.5	10.9	11.8	11.4	10.3	10.3	10.4	10.4	9.8	4.9	2.2	3.0	6.6	10.5	12.8	11.0	11.3	12.6	13.3	14.1	14.2	13.5	12.5	8.6
9.3	6.9	5.0	6.6	3.7	3.9	2.3	2.6	2.2	3.4	10.6	13.0	12.7	11.7	8.4	4.9	2.2	3.7	9.2	12.1	13.6	9.9	7.4	9.9	10.4	10.9	11.8	13.8	13.5	12.8	12.7	13.8	15.1	15.5	15.6	13.0
15.4	14.6	11.4	11.6	6.7	5.7	4.9	4.3	3.6	3.9	9.1	14.0	13.8	10.0	4.6	3.0	1.7	2.4	4.1	13.0	14.5	13.3	12.8	11.1	7.9	6.6	4.6	4.3	6.4	13.9	16.7	16.1	14.1	13.9	15.7	16.0
10.4	12.1	10.7	11.0	8.3	6.8	5.7	3.8	2.6	3.2	3.5	11.9	11.9	10.1	7.9	4.7	2.7	1.9	2.1	9.2	12.7	10.2	7.7	7.0	3.5	3.1	2.0	1.5	2.7	8.6	9.7	6.7	7.5	8.2	9.3	9.6
6.7	8.8	7.2	7.2	7.8	6.1	5.6	4.8	4.2	3.9	4.8	9.4	10.2	8.2	9.1	7.3	5.6	4.4	3.3	2.9	6.6	7.1	6.6	6.9	4.7	3.6	3.5	3.5	2.6	3.7	5.9	5.9	6.3	6.3	5.4	7.8
6.0	6.5	6.4	5.7	5.4	5.3	5.6	4.9	5.1	5.2	6.6	7.3	7.2	7.0	7.1	6.9	6.0	5.8	5.3	5.1	5.5	6.6	6.4	6.6	6.9	6.2	5.8	5.5	4.9	4.6	4.9	5.3	5.5	6.7	7.0	8.0
6.4	6.4	5.4	4.9	4.7	4.7	4.8	5.3	5.0	5.3	6.3	6.3	6.0	5.8	6.0	5.9	5.3	5.0	4.1	3.7	4.3	4.7	4.7	4.5	4.6	5.0	4.8	4.7	4.6	4.7	4.8	5.1	5.1	5.4	5.3	6.5
4.2	4.5	4.5	4.2	4.2	4.0	3.9	4.3	4.3	3.9	4.2	5.1	5.9	5.6	5.0	4.1	3.9	3.8	3.3	3.2	3.1	3.4	4.0	4.4	3.9	4.0	3.8	3.6	3.5	3.7	3.8	3.8	4.0	4.4	4.6	4.5
3.7	3.8	3.7	4.1	3.8	3.9	4.2	4.3	4.4	3.4	3.8	4.5	4.2	3.7	3.7	3.8	4.2	4.3	3.5	3.0	2.9	2.7	2.5	2.5	2.8	3.1	2.7	2.6	2.6	2.4	2.3	2.4	2.7	3.8	4.4	3.7
3.7	3.6	3.7	3.9	4.1	4.1	4.2	4.0	3.4	3.2	3.2	3.2	3.2	3.0	3.0	3.3	3.0	2.8	2.5	2.4	2.5	2.4	2.5	2.6	2.6	2.6	2.4	2.4	2.4	2.4	2.4	2.3	2.4	3.3	4.2	3.9

Figure 62. ATOVS MEAN O-B brightness temperature differences (deg C). JANUARY 2006
Channel: HIRS4 (400 hPa)
NOAA18, using all observations



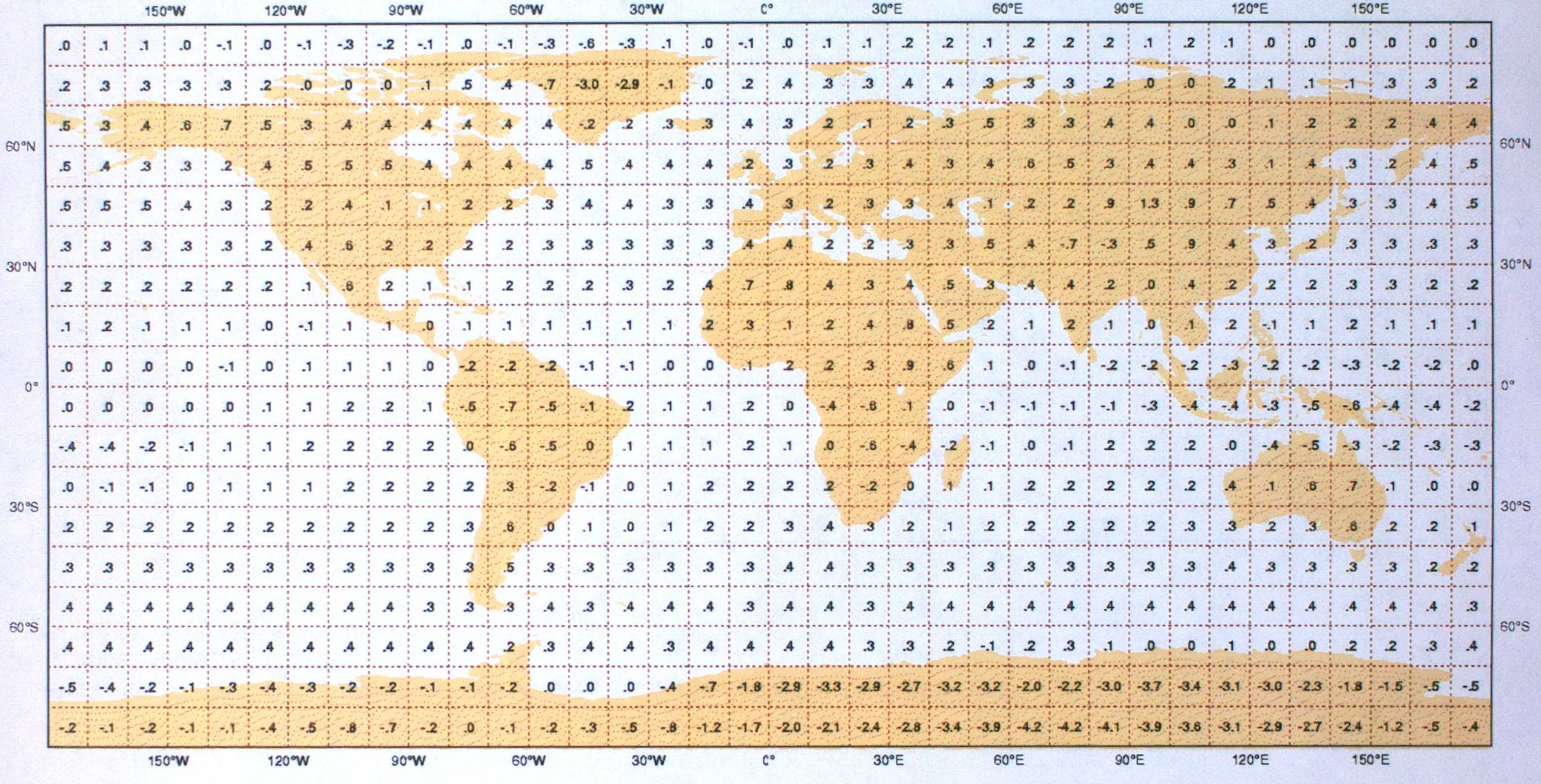
-.6	-.6	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.6	-.7	-.8	-.9	-1.0	-1.1	-1.3	-1.5	-1.5	-1.5	-1.5	-1.5	-1.4	-1.3	-1.3	-1.2	-1.1	-1.1	-1.1	-1.1	-1.0	-.9	-.8	-.8	-.8	-.7	-.7
-.4	-.4	-.3	-.3	-.3	-.3	-.3	-.2	-.2	-.3	-.4	-.5	-.5	-.6	-.8	-1.2	-1.7	-1.8	-2.0	-2.0	-1.7	-1.4	-1.4	-1.2	-1.0	-1.0	-.9	-.9	-1.0	-.9	-.9	-.8	-.8	-.6	-.5	-.5
-.3	-.3	-.4	-.4	-.3	-.2	-.2	-.2	-.1	-.2	-.3	-.4	-.6	-.9	-1.2	-1.5	-2.2	-2.5	-2.5	-2.5	-1.8	-1.4	-1.4	-1.1	-1.1	-.9	-.7	-.7	-.7	-.6	-.6	-.5	-.6	-.6	-.6	-.4
-.5	-.6	-.7	-.8	-1.0	-1.1	-1.1	-.6	-.4	-.3	-.5	-.7	-1.2	-1.5	-1.9	-2.5	-2.4	-2.2	-1.9	-1.7	-1.3	-1.1	-1.1	-.9	-.8	-.6	-.6	-.7	-.7	-.5	-.4	-.4	-.8	-1.1	-.8	-.5
-1.1	-1.8	-1.8	-1.7	-1.8	-2.0	-2.0	-1.4	-1.0	-1.0	-1.3	-1.5	-1.7	-1.9	-2.1	-2.1	-1.5	-1.1	-1.4	-1.4	-1.2	-1.0	-1.0	-.8	-.8	-1.4	-1.3	-1.1	-.8	-.7	-.5	-.4	-.5	-.7	-.9	-1.0
-2.7	-3.1	-2.7	-2.2	-2.1	-1.6	-1.3	-1.4	-1.6	-1.7	-1.9	-2.0	-1.9	-1.9	-1.7	-1.4	-1.1	-1.1	-1.0	-1.6	-1.3	-1.2	-1.2	-1.2	-1.7	-2.5	-1.9	-1.9	-1.7	-1.7	-1.3	-1.2	-1.0	-1.1	-1.5	-1.9
-1.1	-1.3	-1.7	-1.9	-1.5	-1.4	-1.6	-1.6	-1.3	-1.3	-1.2	-1.2	-1.2	-1.1	-1.0	-1.1	-1.3	-1.2	-1.3	-2.1	-1.7	-1.3	-1.4	-1.3	-1.5	-1.1	-1.1	-1.0	-1.0	-1.1	-1.1	-.8	-.6	-.8	-.9	-1.0
-1.0	-1.0	-1.7	-2.3	-2.6	-2.8	-2.9	-1.9	-1.1	-1.2	-1.4	-1.3	-1.4	-1.9	-2.2	-2.5	-2.5	-2.4	-1.8	-1.7	-1.3	-1.0	-.8	-.7	-.9	-1.0	-1.8	-1.5	-1.8	-2.9	-3.5	-2.8	-3.0	-2.8	-1.4	-1.1
-2.6	-1.8	-1.4	-1.7	-2.0	-1.8	-1.9	-1.2	-1.0	-1.6	-2.6	-3.4	-2.9	-3.4	-4.1	-3.8	-2.8	-3.0	-3.9	-3.8	-3.0	-1.3	-.9	-.9	-1.5	-2.8	-4.6	-5.0	-5.7	-6.2	-6.2	-6.5	-6.8	-6.4	-5.3	-3.2
-2.9	-1.8	-1.3	-1.5	-.9	-.9	-.8	-.8	-.9	-1.3	-3.7	-5.4	-5.0	-4.2	-2.5	-1.5	-1.1	-1.4	-3.6	-5.0	-5.3	-2.9	-1.9	-2.6	-2.8	-3.1	-4.1	-6.5	-8.0	-8.3	-7.8	-7.6	-8.4	-8.0	-7.5	-5.2
-7.2	-6.5	-3.9	-3.0	-1.4	-1.3	-1.2	-1.0	-1.0	-1.2	-3.1	-6.3	-6.0	-3.2	-1.3	-.9	-.7	-.9	-1.8	-5.2	-6.6	-5.2	-4.3	-3.2	-1.9	-1.5	-1.1	-1.4	-2.7	-6.5	-10.0	-9.1	-6.5	-5.1	-6.7	-6.7
-3.1	-4.7	-3.4	-3.0	-1.9	-1.4	-1.2	-1.1	-.9	-.9	-1.0	-3.2	-3.4	-3.0	-2.1	-1.1	-.8	-.7	-.7	-2.2	-3.6	-2.7	-1.9	-1.6	-.9	-.8	-.7	-.8	-1.0	-2.6	-2.6	-1.7	-1.9	-2.0	-2.8	-2.9
-1.7	-2.2	-1.9	-1.7	-2.0	-1.2	-1.2	-1.1	-1.0	-.9	-1.1	-2.0	-2.2	-1.8	-2.4	-1.9	-1.3	-.9	-.8	-.8	-1.3	-1.4	-1.3	-1.4	-1.1	-1.0	-.9	-1.0	-.9	-.8	-1.2	-1.3	-1.5	-1.6	-1.4	-1.8
-1.5	-1.5	-1.6	-1.4	-1.2	-1.1	-1.1	-1.0	-1.1	-1.1	-1.2	-1.4	-1.3	-1.4	-1.4	-1.6	-1.3	-1.3	-1.2	-1.0	-1.0	-1.2	-1.3	-1.4	-1.6	-1.5	-1.4	-1.3	-1.0	-.8	-.8	-.9	-1.1	-1.5	-1.7	-1.9
-1.1	-1.0	-.9	-.8	-.8	-.8	-.7	-.8	-.9	-.9	-1.1	-1.2	-1.0	-1.0	-1.1	-1.0	-.9	-.9	-.7	-.5	-.6	-.6	-.6	-.6	-.7	-.8	-.7	-.6	-.6	-.6	-.7	-.7	-.7	-.8	-.9	-1.1
-.5	-.5	-.5	-.5	-.5	-.5	-.4	-.5	-.6	-.5	-.5	-.6	-.7	-.8	-.8	-.6	-.6	-.6	-.5	-.4	-.3	-.3	-.3	-.4	-.4	-.4	-.3	-.3	-.3	-.3	-.4	-.4	-.5	-.6	-.7	-.6
-.3	-.4	-.4	-.4	-.4	-.5	-.5	-.4	-.4	-.3	-.3	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.3	-.2	-.1	-.1	-.1	-.1	-.2	-.1	-.1	-.1	.0	-.1	-.1	-.1	-.2	-.2	-.3	-.3
-.1	-.1	-.2	-.2	-.2	-.3	-.3	-.3	-.2	-.2	-.2	-.2	-.1	-.2	-.1	-.2	-.1	-.1	-.1	.0	.0	.1	.1	.0	.0	.0	.0	.1	.1	.1	.1	.0	.0	-.1	-.2	-.2

Figure 63. ATOVS SD O-B brightness temperature differences (deg C). JANUARY 2006
Channel: HIRS4 (400 hPa)
NOAA18, using all observations



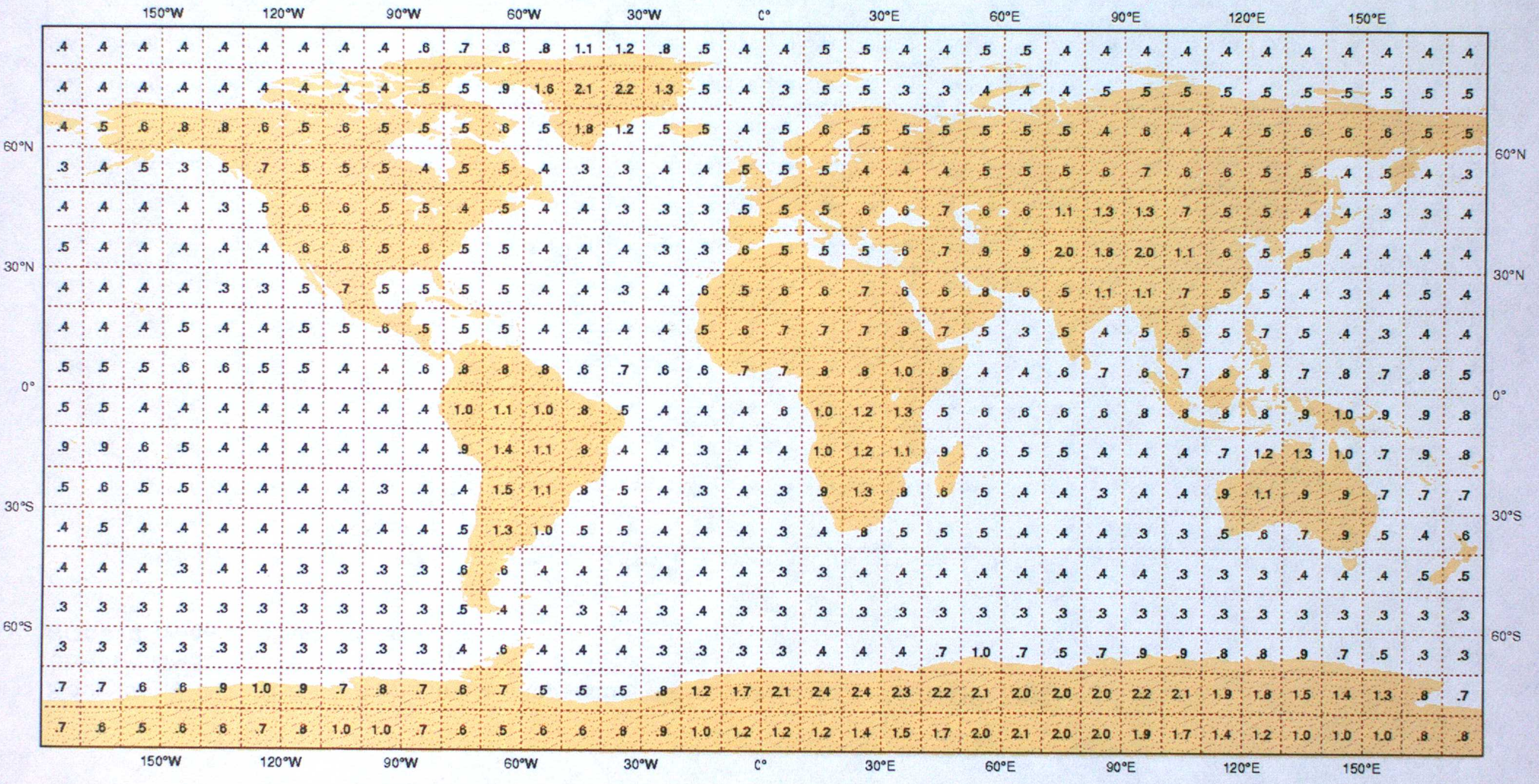
1.0	1.2	1.2	1.3	1.2	1.1	1.0	1.0	1.0	1.0	1.2	1.3	1.4	1.5	1.4	1.5	1.5	1.6	1.8	1.8	2.1	2.0	1.9	1.7	1.5	1.4	1.2	1.2	1.3	1.3	1.3	1.1	1.0	1.0	1.0	1.1
1.1	1.1	1.1	1.0	1.1	.9	.9	1.0	1.1	1.2	1.2	1.4	1.4	1.5	1.8	1.6	1.9	2.1	2.1	2.2	2.0	1.9	1.8	1.7	1.7	1.5	1.3	1.2	1.2	1.3	1.3	1.3	1.3	1.3	1.3	1.1
1.1	1.0	1.0	1.1	1.1	1.1	1.0	1.0	1.1	1.1	1.5	1.6	1.6	2.0	1.9	1.9	2.4	2.6	2.6	2.6	2.4	1.9	1.6	1.5	1.6	1.6	1.5	1.4	1.3	1.3	1.1	1.2	1.4	1.5	1.2	1.1
1.2	1.3	1.5	1.5	1.5	1.5	1.7	1.3	1.4	1.4	1.3	1.7	2.3	2.4	2.4	2.7	2.4	2.4	2.3	2.2	1.6	1.3	1.4	1.5	1.6	1.7	1.6	1.5	1.2	1.1	1.1	1.2	1.4	1.8	1.4	1.4
1.9	2.6	2.6	2.4	2.6	2.2	2.1	2.0	1.6	1.6	1.8	2.1	2.3	2.5	2.7	2.6	2.0	1.9	2.0	2.3	1.9	1.5	1.5	1.6	1.5	1.9	1.8	1.8	1.6	1.5	1.3	1.2	1.2	1.6	1.6	1.7
2.9	3.2	2.8	2.4	2.5	1.8	1.8	1.9	2.0	2.3	2.4	2.6	2.2	2.1	2.5	1.9	1.8	1.9	1.6	2.4	1.8	1.7	1.7	1.8	2.5	2.5	2.3	2.3	2.1	2.2	2.0	1.9	1.6	1.9	2.3	2.3
1.4	1.9	2.1	2.3	2.2	1.9	1.9	1.9	1.8	2.2	1.8	2.0	1.9	1.6	1.5	1.5	1.9	1.8	1.7	2.7	2.0	1.6	1.8	1.6	2.1	1.5	1.6	1.5	1.8	1.7	1.6	1.2	1.2	1.1	1.6	1.3
1.3	1.6	2.4	3.1	3.2	3.6	3.9	2.9	1.8	2.0	2.1	2.4	2.5	2.8	3.0	2.9	2.8	3.1	2.2	2.2	1.5	1.4	1.3	1.0	1.9	1.8	2.5	1.9	2.4	3.9	4.8	3.9	4.0	3.6	2.3	1.8
3.3	2.6	2.1	2.5	3.2	3.0	3.4	2.2	1.4	2.4	3.5	4.2	3.7	4.3	4.6	4.4	3.9	4.2	4.2	4.1	3.9	2.1	1.3	1.2	2.7	4.5	5.4	4.7	5.1	5.3	5.8	6.1	6.2	5.8	5.2	3.7
4.1	3.0	2.0	2.4	1.3	1.5	1.3	1.1	1.0	1.6	4.2	5.3	5.3	4.8	3.2	2.0	1.3	1.9	3.9	5.1	5.5	4.1	3.0	3.9	4.1	4.4	4.8	5.7	5.7	5.4	5.6	5.9	6.6	6.8	6.7	5.7
6.6	6.4	4.3	4.4	2.2	2.0	1.9	1.8	1.5	1.6	3.6	5.8	5.5	4.0	1.7	1.7	1.4	1.6	2.3	5.6	6.1	5.6	5.0	4.5	3.0	2.8	2.1	2.1	3.2	6.6	7.6	7.4	6.3	6.4	7.3	6.9
4.2	4.9	3.9	4.0	2.7	2.3	1.8	1.6	1.4	1.3	1.8	4.4	4.5	3.6	3.0	2.0	1.2	1.3	1.5	3.8	5.2	4.3	2.9	2.7	1.3	1.4	1.3	1.2	1.7	4.0	4.0	2.9	2.9	3.2	4.2	4.1
2.5	3.0	2.2	2.5	2.8	2.2	2.1	1.7	1.4	1.6	2.2	3.1	3.4	2.7	3.1	2.5	1.8	1.5	1.3	1.0	2.4	2.4	2.1	2.1	1.4	1.4	1.4	1.6	1.7	1.6	1.9	1.9	2.0	2.1	1.7	2.8
2.1	2.2	1.9	1.6	1.5	1.5	1.6	1.4	1.4	1.5	2.0	2.0	2.2	2.3	2.1	2.1	1.8	1.6	1.4	1.3	1.5	1.8	1.8	1.9	1.9	1.8	1.6	1.6	1.6	1.6	1.6	1.7	1.8	2.0	2.1	2.6
1.9	1.8	1.7	1.4	1.2	1.2	1.2	1.3	1.4	1.5	1.5	1.6	1.7	1.7	1.7	1.6	1.4	1.3	1.2	1.2	1.2	1.4	1.3	1.2	1.3	1.3	1.3	1.4	1.3	1.1	1.2	1.3	1.3	1.5	1.4	1.8
1.3	1.3	1.4	1.3	1.1	1.2	1.1	1.1	1.2	1.2	1.2	1.4	1.6	1.5	1.5	1.4	1.2	1.1	.9	.8	.9	1.0	1.1	1.2	1.1	1.1	1.1	1.0	1.0	1.1	1.1	1.0	.9	1.0	1.1	1.2
1.1	1.1	1.1	1.2	1.1	1.1	1.2	1.2	1.3	1.1	1.1	1.1	1.1	1.1	1.2	1.1	1.0	1.1	1.0	.9	.9	.9	.9	.9	.9	1.0	1.0	.9	1.0	.9	.8	.9	.9	1.0	1.1	1.1
1.0	1.1	1.2	1.1	1.2	1.2	1.3	1.4	1.3	1.2	1.1	1.1	1.1	1.0	.9	.9	.8	.8	.8	.8	.9	.9	.9	1.0	.9	.9	.9	.9	.9	.9	.9	.8	.9	.9	1.0	1.0

Figure 64. ATOVS MEAN O-B brightness temperature differences (deg C). JANUARY 2006
Channel: AMSUA-5 (700 hPa)
NOAA18, using all observations



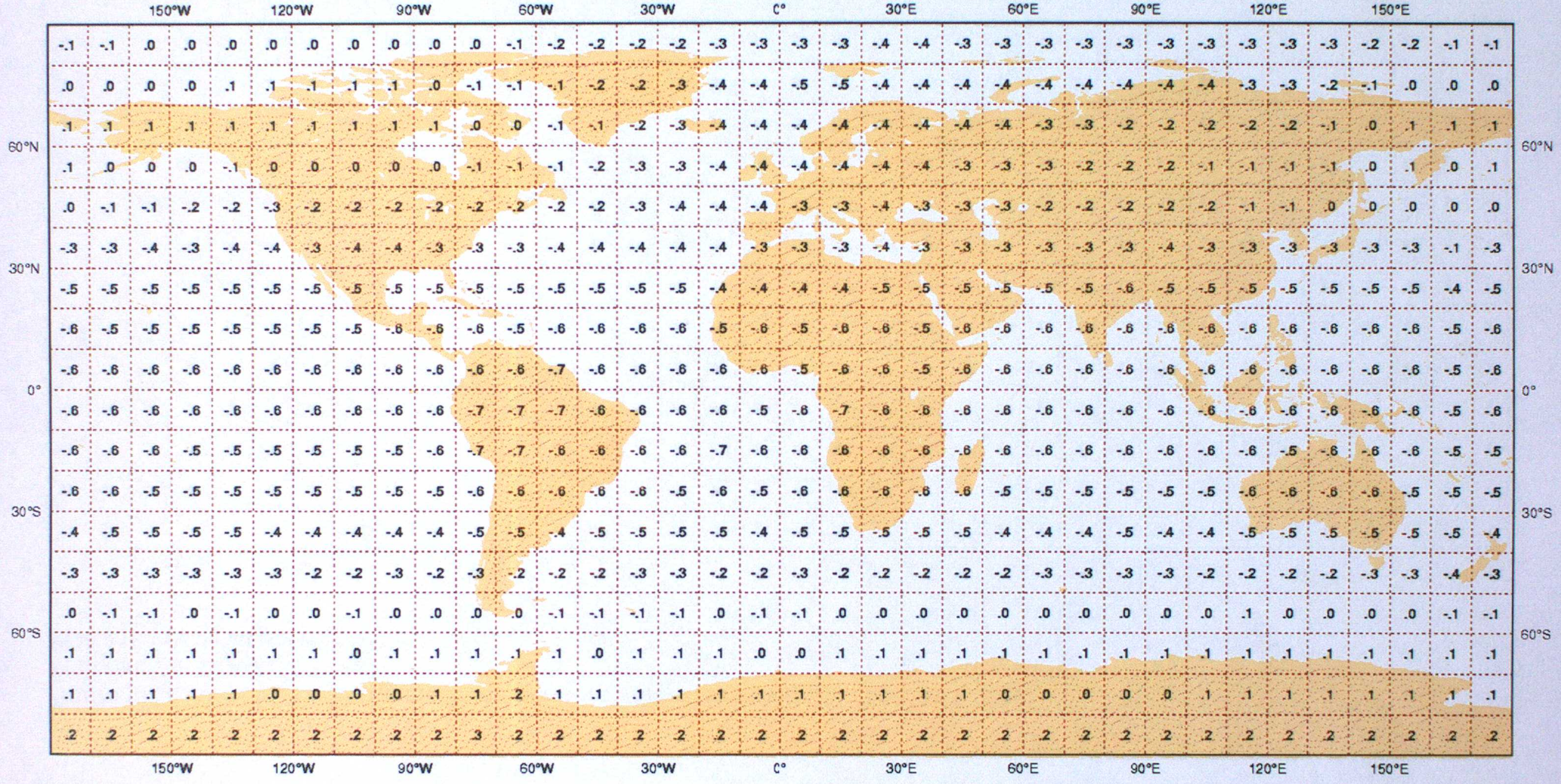
.0	.1	.1	.0	-.1	.0	-.1	-.3	-.2	-.1	.0	-.1	-.3	-.6	-.3	.1	.0	-.1	.0	.1	.1	.2	.2	.1	.2	.2	.2	.1	.2	.1	.0	.0	.0	.0	.0	.0
.2	.3	.3	.3	.3	.2	.0	.0	.0	.1	.5	.4	-.7	-3.0	-2.9	-.1	.0	.2	.4	.3	.3	.4	.4	.3	.3	.3	.2	.0	.0	.2	.1	.1	.1	.3	.3	.2
.5	.3	.4	.6	.7	.5	.3	.4	.4	.4	.4	.4	.4	-.2	.2	.3	.3	.4	.3	.2	.1	.2	.3	.5	.3	.3	.4	.4	.0	.0	.1	.2	.2	.2	.4	.4
.5	.4	.3	.3	.2	.4	.5	.5	.5	.4	.4	.4	.4	.5	.4	.4	.4	.2	.3	.2	.3	.4	.3	.4	.6	.5	.3	.4	.4	.3	.1	.4	.3	.2	.4	.5
.5	.5	.5	.4	.3	.2	.2	.4	.1	.1	.2	.2	.3	.4	.4	.3	.3	.4	.3	.2	.3	.3	.4	.1	.2	.2	.9	1.3	.9	.7	.5	.4	.3	.3	.4	.5
.3	.3	.3	.3	.3	.2	.4	.6	.2	.2	.2	.2	.3	.3	.3	.3	.3	.4	.4	.2	.2	.3	.3	.5	.4	-.7	-.3	.5	.9	.4	.3	.2	.3	.3	.3	.3
.2	.2	.2	.2	.2	.2	.1	.6	.2	.1	.1	.2	.2	.2	.3	.2	.4	.7	.8	.4	.3	.4	.5	.3	.4	.4	.2	.0	.4	.2	.2	.2	.3	.3	.2	.2
.1	.2	.1	.1	.1	.0	-.1	.1	.1	.0	.1	.1	.1	.1	.1	.1	.2	.3	.1	.2	.4	.8	.5	.2	.1	.2	.1	.0	.1	.2	-.1	.1	.2	.1	.1	.1
.0	.0	.0	.0	-.1	.0	.1	.1	.1	.0	-.2	-.2	-.2	-.1	-.1	.0	.0	.1	.2	.2	.3	.9	.6	.1	.0	-.1	-.2	-.2	-.2	-.3	-.2	-.2	-.3	-.2	-.2	.0
.0	.0	.0	.0	.0	.1	.1	.2	.2	.1	-.5	-.7	-.5	-.1	.2	.1	.1	.2	.0	-.4	-.6	.1	.0	-.1	-.1	-.1	-.1	-.3	-.4	-.4	-.3	-.5	-.6	-.4	-.4	-.2
-.4	-.4	-.2	-.1	.1	.1	.2	.2	.2	.2	.0	-.6	-.5	.0	.1	.1	.1	.2	.1	.0	-.6	-.4	-.2	-.1	.0	.1	.2	.2	.2	.0	-.4	-.5	-.3	-.2	-.3	-.3
.0	-.1	-.1	.0	.1	.1	.1	.2	.2	.2	.2	.3	-.2	-.1	.0	.1	.2	.2	.2	.2	-.2	.0	.1	.1	.2	.2	.2	.2	.2	.4	.1	.6	.7	.1	.0	.0
.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.3	.6	.0	.1	.0	.1	.2	.2	.3	.4	.3	.2	.1	.2	.2	.2	.2	.2	.3	.3	.2	.3	.6	.2	.2	.1
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.5	.3	.3	.3	.3	.3	.3	.4	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.3	.3	.3	.3	.2	.2
.4	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3	.4	.3	.4	.4	.4	.3	.4	.4	.3	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.3
.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.2	.3	.4	.4	.3	.4	.4	.4	.4	.3	.3	.2	-.1	.2	.3	.1	.0	.0	.1	.0	.0	.2	.2	.3	.4
-.5	-.4	-.2	-.1	-.3	-.4	-.3	-.2	-.2	-.1	-.1	-.2	.0	.0	.0	-.4	-.7	-1.8	-2.9	-3.3	-2.9	-2.7	-3.2	-3.2	-2.0	-2.2	-3.0	-3.7	-3.4	-3.1	-3.0	-2.3	-1.8	-1.5	-.5	-.5
-.2	-.1	-.2	-.1	-.1	-.4	-.5	-.8	-.7	-.2	.0	-.1	-.2	-.3	-.5	-.8	-1.2	-1.7	-2.0	-2.1	-2.4	-2.8	-3.4	-3.9	-4.2	-4.2	-4.1	-3.9	-3.6	-3.1	-2.9	-2.7	-2.4	-1.2	-.5	-.4

Figure 65. ATOVS SD O-B brightness temperature differences (deg C). JANUARY 2006
Channel: AMSUA-5 (700 hPa)
NOAA18, using all observations



.4	.4	.4	.4	.4	.4	.4	.4	.4	.6	.7	.6	.8	1.1	1.2	.8	.5	.4	.4	.5	.5	.4	.4	.5	.5	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4	.4
.4	.4	.4	.4	.4	.4	.4	.4	.4	.5	.5	.9	1.6	2.1	2.2	1.3	.5	.4	.3	.5	.5	.3	.3	.4	.4	.4	.5	.5	.5	.5	.5	.5	.5	.5	.5	.5
.4	.5	.6	.8	.8	.6	.5	.6	.5	.5	.5	.6	.5	1.8	1.2	.5	.5	.4	.5	.6	.5	.5	.5	.5	.5	.5	.4	.6	.4	.4	.5	.6	.6	.6	.5	.5
.3	.4	.5	.3	.5	.7	.5	.5	.5	.4	.5	.5	.4	.3	.3	.4	.4	.5	.5	.5	.4	.4	.4	.5	.5	.5	.6	.7	.6	.6	.5	.5	.4	.5	.4	.3
.4	.4	.4	.4	.3	.5	.6	.6	.5	.5	.4	.5	.4	.4	.3	.3	.3	.5	.5	.5	.6	.6	.7	.6	.6	1.1	1.3	1.3	.7	.5	.5	.4	.4	.3	.3	.4
.5	.4	.4	.4	.4	.4	.6	.6	.5	.6	.5	.5	.4	.4	.4	.3	.3	.6	.5	.5	.5	.6	.7	.9	.9	2.0	1.8	2.0	1.1	.6	.5	.5	.4	.4	.4	.4
.4	.4	.4	.4	.3	.3	.5	.7	.5	.5	.5	.5	.4	.4	.3	.4	.6	.5	.6	.6	.7	.6	.6	.8	.6	.5	1.1	1.1	.7	.5	.5	.4	.3	.4	.5	.4
.4	.4	.4	.5	.4	.4	.5	.5	.6	.5	.5	.5	.4	.4	.4	.4	.5	.6	.7	.7	.7	.8	.7	.5	.3	.5	.4	.5	.5	.5	.7	.5	.4	.3	.4	.4
.5	.5	.5	.6	.6	.5	.5	.4	.4	.6	.8	.8	.8	.6	.7	.6	.6	.7	.7	.8	.8	1.0	.8	.4	.4	.6	.7	.6	.7	.8	.8	.7	.8	.7	.8	.5
.5	.5	.4	.4	.4	.4	.4	.4	.4	.4	1.0	1.1	1.0	.8	.5	.4	.4	.4	.6	1.0	1.2	1.3	.5	.6	.6	.6	.6	.8	.8	.8	.8	.9	1.0	.9	.9	.8
.9	.9	.6	.5	.4	.4	.4	.4	.4	.4	.9	1.4	1.1	.8	.4	.4	.3	.4	.4	1.0	1.2	1.1	.9	.6	.5	.5	.4	.4	.4	.7	1.2	1.3	1.0	.7	.9	.8
.5	.6	.5	.5	.4	.4	.4	.4	.3	.4	.4	1.5	1.1	.8	.5	.4	.3	.4	.3	.9	1.3	.8	.6	.5	.4	.4	.3	.4	.4	.9	1.1	.9	.9	.7	.7	.7
.4	.5	.4	.4	.4	.4	.4	.4	.4	.4	.5	1.3	1.0	.5	.5	.4	.4	.4	.3	.4	.8	.5	.5	.5	.4	.4	.4	.3	.3	.5	.6	.7	.9	.5	.4	.6
.4	.4	.4	.3	.4	.4	.3	.3	.3	.3	.6	.6	.4	.4	.4	.4	.4	.4	.3	.3	.4	.4	.4	.4	.4	.4	.4	.4	.3	.3	.3	.4	.4	.4	.5	.5
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.5	.4	.4	.3	.4	.3	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.6	.4	.4	.4	.3	.3	.3	.3	.4	.4	.4	.7	1.0	.7	.5	.7	.9	.9	.8	.8	.9	.7	.5	.3	.3
.7	.7	.6	.6	.9	1.0	.9	.7	.8	.7	.6	.7	.5	.5	.5	.8	1.2	1.7	2.1	2.4	2.4	2.3	2.2	2.1	2.0	2.0	2.0	2.2	2.1	1.9	1.8	1.5	1.4	1.3	.8	.7
.7	.6	.5	.6	.6	.7	.8	1.0	1.0	.7	.6	.5	.6	.6	.8	.9	1.0	1.2	1.2	1.2	1.4	1.5	1.7	2.0	2.1	2.0	2.0	1.9	1.7	1.4	1.2	1.0	1.0	1.0	.8	.8

Figure 66. ATOVS MEAN O-B brightness temperature differences (deg C). JANUARY 2006
Channel: AMSUA-7 (300 hPa)
NOAA18, using all observations



-.1	-.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	-.1	-.2	-.2	-.2	-.2	-.3	-.3	-.3	-.3	-.4	-.4	-.3	-.3	-.3	-.3	-.3	-.3	-.3	-.3	-.3	-.3	-.2	-.2	-.1	-.1
.0	.0	.0	.0	.1	.1	.1	.1	.1	.0	-.1	-.1	-.1	-.2	-.2	-.3	-.4	-.4	-.5	-.5	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.3	-.3	-.2	-.1	.0	.0	.0
.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.0	.0	-.1	-.1	-.2	-.3	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.3	-.3	-.2	-.2	-.2	-.2	-.2	-.1	.0	.1	.1	.1
.1	.0	.0	.0	-.1	.0	.0	.0	.0	.0	-.1	-.1	-.1	-.2	-.3	-.3	-.4	-.4	-.4	-.4	-.4	-.4	-.3	-.3	-.3	-.2	-.2	-.2	-.1	-.1	-.1	-.1	.0	.1	.0	.1
.0	-.1	-.1	-.2	-.2	-.3	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.3	-.4	-.4	-.4	-.3	-.3	-.4	-.3	-.3	-.3	-.2	-.2	-.2	-.2	-.2	-.1	-.1	.0	.0	.0	.0	.0
-.3	-.3	-.4	-.3	-.4	-.4	-.3	-.4	-.4	-.3	-.3	-.3	-.4	-.4	-.4	-.4	-.4	-.3	-.3	-.3	-.4	-.3	-.3	-.3	-.3	-.3	-.3	-.4	-.3	-.3	-.3	-.3	-.3	-.3	-.1	-.3
-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.4	-.4	-.4	-.4	-.5	-.5	-.5	-.5	-.5	-.5	-.6	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.4	-.5
-.6	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.6	-.6	-.6	-.5	-.6	-.6	-.6	-.6	-.5	-.6	-.5	-.6	-.6	-.5	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.5	-.6
-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.7	-.6	-.6	-.6	-.6	-.6	-.5	-.6	-.6	-.5	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.5	-.6
-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.7	-.7	-.7	-.6	-.6	-.6	-.6	-.5	-.6	-.7	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.5	-.6
-.6	-.6	-.6	-.5	-.5	-.5	-.5	-.5	-.5	-.6	-.7	-.7	-.6	-.6	-.6	-.6	-.7	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.6	-.5	-.6	-.6	-.6	-.5	-.5
-.6	-.6	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.6	-.6	-.6	-.6	-.6	-.5	-.6	-.5	-.6	-.6	-.6	-.6	-.6	-.5	-.5	-.5	-.5	-.5	-.5	-.6	-.6	-.6	-.6	-.5	-.5	-.5
-.4	-.5	-.5	-.5	-.5	-.4	-.4	-.4	-.4	-.4	-.5	-.5	-.4	-.5	-.5	-.5	-.5	-.4	-.5	-.5	-.5	-.5	-.5	-.4	-.4	-.4	-.5	-.4	-.4	-.5	-.5	-.5	-.5	-.5	-.5	-.4
-.3	-.3	-.3	-.3	-.3	-.3	-.2	-.2	-.3	-.2	-.3	-.2	-.2	-.2	-.3	-.3	-.2	-.2	-.3	-.2	-.2	-.2	-.2	-.2	-.3	-.3	-.3	-.3	-.2	-.2	-.2	-.2	-.3	-.3	-.4	-.3
.0	-.1	-.1	.0	-.1	.0	.0	-.1	.0	.0	.0	.0	-.1	-.1	-.1	-.1	.0	-.1	-.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0	.0	.0	-.1	-.1
.1	.1	.1	.1	.1	.1	.1	.0	.1	.1	.1	.1	.1	.0	.1	.1	.1	.0	.0	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1
.1	.1	.1	.1	.1	.0	.0	.0	.0	.1	.1	.2	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.0	.0	.0	.0	.0	.1	.1	.1	.1	.1	.1	.1	.1
.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.3	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2	.2

Figure 67. ATOVS SD O-B brightness temperature differences (deg C). JANUARY 2006
Channel: AMSUA-7 (300 hPa)
NOAA18, using all observations

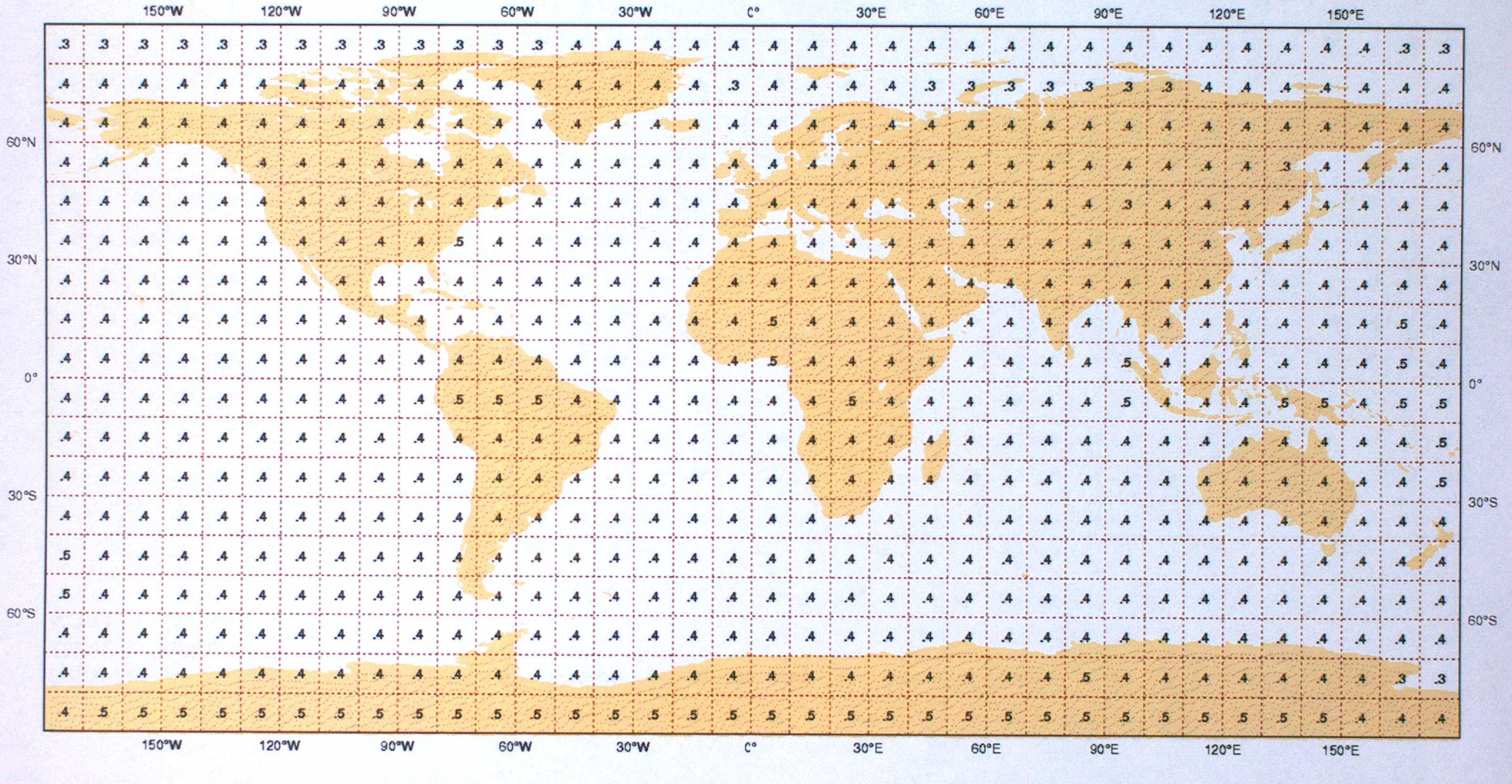
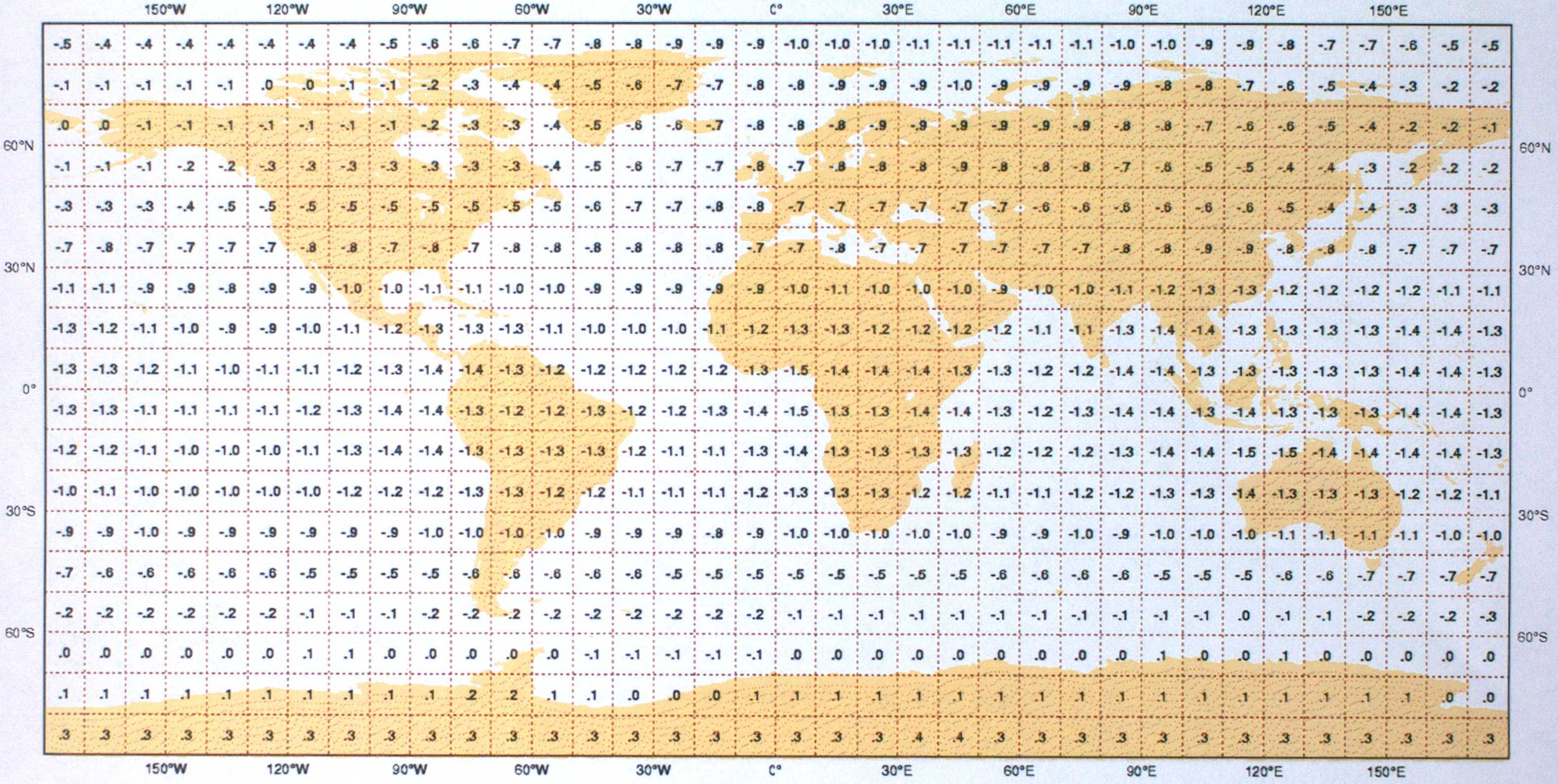

150°W
120°W
90°W
60°W
30°W
0°
30°E
60°E
90°E
120°E
150°E
60°N
30°N
0°
30°S
60°S
.3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .3 .3
.4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .3 .4 .4 .4 .4 .3 .3 .3 .3 .3 .3 .3 .4 .4 .4 .4 .4 .4 .4
.4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4
.4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .3 .4 .4 .4 .4
.4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .3 .4 .4 .4 .4 .4 .4 .4 .4
.4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .5 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4
.4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4
.4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .5 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .5 .4
.4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .5 .4 .4 .4 .4 .4 .4 .4 .4 .5 .4 .4 .4 .4 .4 .4 .5 .4
.4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .5 .5 .5 .4 .4 .4 .4 .4 .4 .4 .5 .4 .4 .4 .4 .4 .4 .5 .4 .4 .4 .5 .5 .4 .5 .5
.4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .5
.4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .5
.4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4
.5 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4
.5 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4
.4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4
.4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .5 .4 .4 .4 .4 .4 .4 .4 .3 .3
.4 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .5 .4 .4 .4

Figure 68. ATOVS MEAN O-B brightness temperature differences (deg C). JANUARY 2006
Channel: AMSUA-9 (100 hPa)
NOAA18, using all observations



-.5	-.4	-.4	-.4	-.4	-.4	-.4	-.4	-.5	-.6	-.6	-.7	-.7	-.8	-.8	-.9	-.9	-.9	-1.0	-1.0	-1.0	-1.1	-1.1	-1.1	-1.1	-1.1	-1.0	-1.0	-.9	-.9	-.8	-.7	-.7	-.6	-.5	-.5
-.1	-.1	-.1	-.1	-.1	.0	.0	-.1	-.1	-.2	-.3	-.4	-.4	-.5	-.6	-.7	-.7	-.8	-.8	-.9	-.9	-.9	-1.0	-.9	-.9	-.9	-.9	-.8	-.8	-.7	-.6	-.5	-.4	-.3	-.2	-.2
.0	.0	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.2	-.3	-.3	-.4	-.5	-.6	-.6	-.7	-.8	-.8	-.8	-.9	-.9	-.9	-.9	-.9	-.9	-.8	-.8	-.7	-.6	-.6	-.5	-.4	-.2	-.2	-.1
-.1	-.1	-.1	-.2	-.2	-.3	-.3	-.3	-.3	-.3	-.3	-.3	-.4	-.5	-.6	-.7	-.7	-.8	-.7	-.8	-.8	-.8	-.9	-.8	-.8	-.8	-.7	-.6	-.5	-.5	-.4	-.4	-.3	-.2	-.2	-.2
-.3	-.3	-.3	-.4	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.6	-.7	-.7	-.8	-.8	-.7	-.7	-.7	-.7	-.7	-.7	-.6	-.6	-.6	-.6	-.6	-.6	-.5	-.4	-.4	-.3	-.3	-.3
-.7	-.8	-.7	-.7	-.7	-.7	-.8	-.8	-.7	-.8	-.7	-.8	-.8	-.8	-.8	-.8	-.8	-.7	-.7	-.8	-.7	-.7	-.7	-.7	-.7	-.7	-.8	-.8	-.9	-.9	-.8	-.8	-.8	-.7	-.7	-.7
-1.1	-1.1	-.9	-.9	-.8	-.9	-.9	-1.0	-1.0	-1.1	-1.1	-1.0	-1.0	-.9	-.9	-.9	-.9	-.9	-1.0	-1.1	-1.0	-1.0	-1.0	-.9	-1.0	-1.0	-1.1	-1.2	-1.3	-1.3	-1.2	-1.2	-1.2	-1.2	-1.1	-1.1
-1.3	-1.2	-1.1	-1.0	-.9	-.9	-1.0	-1.1	-1.2	-1.3	-1.3	-1.3	-1.1	-1.0	-1.0	-1.0	-1.1	-1.2	-1.3	-1.3	-1.2	-1.2	-1.2	-1.2	-1.1	-1.1	-1.3	-1.4	-1.4	-1.3	-1.3	-1.3	-1.3	-1.4	-1.4	-1.3
-1.3	-1.3	-1.2	-1.1	-1.0	-1.1	-1.1	-1.2	-1.3	-1.4	-1.4	-1.3	-1.2	-1.2	-1.2	-1.2	-1.2	-1.3	-1.5	-1.4	-1.4	-1.4	-1.3	-1.3	-1.2	-1.2	-1.4	-1.4	-1.3	-1.3	-1.3	-1.3	-1.3	-1.4	-1.4	-1.3
-1.3	-1.3	-1.1	-1.1	-1.1	-1.1	-1.2	-1.3	-1.4	-1.4	-1.3	-1.2	-1.2	-1.3	-1.2	-1.2	-1.3	-1.4	-1.5	-1.3	-1.3	-1.4	-1.4	-1.3	-1.2	-1.3	-1.4	-1.4	-1.3	-1.4	-1.3	-1.3	-1.3	-1.4	-1.4	-1.3
-1.2	-1.2	-1.1	-1.0	-1.0	-1.0	-1.1	-1.3	-1.4	-1.4	-1.3	-1.3	-1.3	-1.3	-1.2	-1.1	-1.1	-1.3	-1.4	-1.3	-1.3	-1.3	-1.3	-1.2	-1.2	-1.2	-1.3	-1.4	-1.4	-1.5	-1.5	-1.4	-1.4	-1.4	-1.4	-1.3
-1.0	-1.1	-1.0	-1.0	-1.0	-1.0	-1.0	-1.2	-1.2	-1.2	-1.3	-1.3	-1.2	-1.2	-1.1	-1.1	-1.1	-1.2	-1.3	-1.3	-1.3	-1.2	-1.2	-1.1	-1.1	-1.2	-1.2	-1.3	-1.3	-1.4	-1.3	-1.3	-1.3	-1.2	-1.2	-1.1
-.9	-.9	-1.0	-.9	-.9	-.9	-.9	-.9	-.9	-1.0	-1.0	-1.0	-1.0	-.9	-.9	-.9	-.8	-.9	-1.0	-1.0	-1.0	-1.0	-1.0	-.9	-.9	-1.0	-.9	-1.0	-1.0	-1.0	-1.1	-1.1	-1.1	-1.1	-1.0	-1.0
-.7	-.6	-.6	-.6	-.6	-.6	-.5	-.5	-.5	-.5	-.6	-.6	-.6	-.6	-.6	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.5	-.6	-.6	-.6	-.6	-.5	-.5	-.5	-.6	-.6	-.7	-.7	-.7	-.7
-.2	-.2	-.2	-.2	-.2	-.2	-.1	-.1	-.1	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.2	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	-.1	.0	-.1	-.1	-.2	-.2	-.2	-.3
.0	.0	.0	.0	.0	.0	.1	.1	.0	.0	.0	.0	.0	-.1	-.1	-.1	-.1	-.1	.0	.0	.0	.0	.0	.0	.0	.0	.0	.1	.0	.0	.1	.0	.0	.0	.0	.0
.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.2	.2	.1	.1	.0	.0	.0	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.1	.0	.0
.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.4	.4	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3	.3

Figure 69. ATOVS SD O-B brightness temperature differences (deg C). JANUARY 2006
Channel: AMSUA-9 (100 hPa)
NOAA18, using all observations

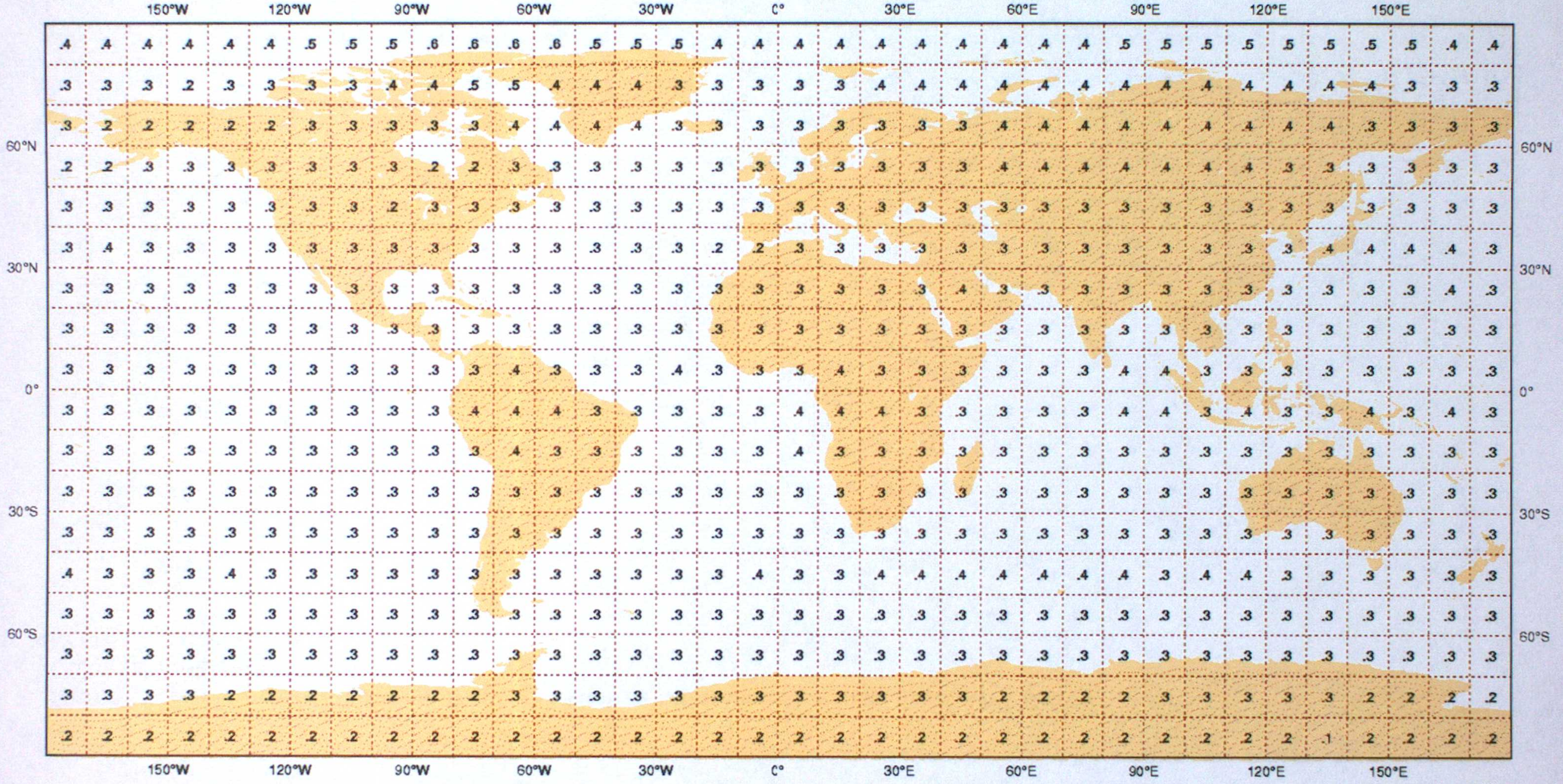

150°W 120°W 90°W 60°W 30°W 0° 30°E 60°E 90°E 120°E 150°E
60°N
30°N
0°
30°S
60°S
.4 .4 .4 .4 .4 .4 .5 .5 .5 .6 .6 .6 .6 .5 .5 .5 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .5 .5 .5 .5 .5 .5 .5 .5 .4 .4
.3 .3 .3 .2 .3 .3 .3 .3 .4 .4 .5 .5 .4 .4 .4 .3 .3 .3 .3 .3 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .4 .3 .3 .3
.3 .2 .2 .2 .2 .2 .3 .3 .3 .3 .3 .4 .4 .4 .4 .3 .3 .3 .3 .3 .3 .3 .3 .4 .4 .4 .4 .4 .4 .4 .4 .4 .3 .3 .3 .3
.2 .2 .3 .3 .3 .3 .3 .3 .3 .2 .2 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .4 .4 .4 .4 .4 .4 .4 .3 .3 .3 .3 .3 .3
.3 .3 .3 .3 .3 .3 .3 .3 .2 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3
.3 .4 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .2 .2 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .4 .4 .4 .4 .3
.3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .4 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .4 .3
.3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3
.3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .4 .3 .3 .3 .4 .3 .3 .3 .4 .3 .3 .3 .3 .3 .3 .4 .4 .3 .3 .3 .3 .3 .3 .3 .3
.3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .4 .4 .4 .3 .3 .3 .3 .3 .4 .4 .4 .3 .3 .3 .3 .3 .4 .4 .3 .4 .3 .3 .4 .3 .4 .3
.3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .4 .3 .3 .3 .3 .3 .3 .4 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3
.3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3
.3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3
.4 .3 .3 .3 .4 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .4 .3 .3 .4 .4 .4 .4 .4 .4 .4 .3 .4 .4 .3 .3 .3 .3 .3 .3
.3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3
.3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3
.3 .3 .3 .3 .2 .2 .2 .2 .2 .2 .2 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .3 .2 .2 .2 .2 .3 .3 .3 .3 .3 .2 .2 .2 .2
.2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .2 .1 .2 .2 .2 .2

TABLE 8

MONTHLY MONITORING OF MARINE SURFACE OBSERVATIONS (COSNA)
DATA TYPE:- DRIFTER
MONITORING CENTRE: EXETER
MONTH: Jan 06

Monitoring procedures

Period		:One calendar month.
Data monitored		:Reports from each unique identifier for drifting buoy.
Area monitored		:10°N - 80°N, 85°W - 0°W
Standard of comparison		:Background field from UKMO global model.
Position		:Average latitude and longitude for period.
Observation times		:All hours combined.
Elements monitored		:Mean sea-level pressure (hPa) :Wind speed (m s^{-1}) :Wind direction (degrees)
Parameters monitored	:NOBS	:Number of observations received excluding duplicates.
	:NGE	:Number of observations with gross errors.
	:PGE	:Percentage of observations with gross errors.
	:SD	:SD of difference of observations from background values excluding those with gross errors.
	:BIAS	:Mean difference of observations from background values excluding those with gross errors. **N.B. A positive bias indicates the wind observation is veered to the background**
	:RMS	:Root Mean Square difference of observations from background values excluding those with gross errors
GROSS ERROR LIMITS	:15 hPa (pressure) :25 m s^{-1} (Vector Wind)	

N.B. Observations of wind direction are only included in the wind direction statistics if the observed OR background wind speed > 5 m s^{-1}

IDENTIFIER	LAT.	LONG.	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
13534	28.4	-44.4	P	746	0	1	0.7	-0.4	0.8
41501	15.1	-65.3	P	799	0	9	0.4	-0.7	0.8
41502	13.6	-60.2	P	781	0	9	0.4	-0.1	0.5
41525	25.2	-73.6	P	759	0	8	0.5	-0.1	0.5
41533	12.8	-46.8	P	819	0	11	0.4	0.4	0.5
41535	13.4	-52.4	P	818	0	11	0.4	0.3	0.5
41536	12.8	-58.6	P	337	0	55	0.7	0.8	1.1
41537	12.2	-54.2	P	259	0	51	0.7	0.7	0.9
41543	29.3	-51.5	P	780	0	9	0.9	0.3	0.9
41544	26.6	-69.7	P	1266	0	43	0.5	0.1	0.5
41545	24.9	-61.7	P	782	0	8	0.6	0.7	0.9
41625	23.5	-69.1	P	684	0	7	1.0	0.5	1.2
41630	28.3	-72.4	P	761	0	8	0.6	-0.1	0.6
41643	24.9	-73.8	P	741	0	8	0.7	0.1	0.7
41645	30.0	-68.6	P	1016	0	31	0.5	0.6	0.8
41646	27.7	-78.3	P	704	0	5	0.6	0.2	0.6
41667	15.4	-53.2	P	1313	2	49	0.7	0.7	1.0
41927	28.4	-78.4	P	55	0	93	2.0	5.8	6.1
42570	17.2	-72.9	P	815	0	10	0.5	0.6	0.8
42571	14.3	-79.0	P	814	0	11	0.5	-0.6	0.8
42572	16.1	-80.1	P	192	0	10	0.4	0.2	0.4
44607	37.9	-34.5	P	892	0	18	0.5	-0.1	0.5
44609	47.8	-12.5	P	636	0	1	0.5	-0.1	0.5
44611	60.5	-15.2	P	737	0	1	1.0	-0.2	1.0
44615	42.7	-29.7	P	734	0	1	1.2	0.2	1.2
44635	43.6	-46.4	P	266	0	12	1.1	1.0	1.5
44636	44.0	-59.7	P	339	0	17	1.0	-0.4	1.1
44637	41.0	-65.3	P	434	0	15	0.7	0.4	0.8
44722	49.6	-19.4	P	726	0	1	0.6	0.0	0.6
44723	59.7	-31.7	P	742	0	2	0.8	-0.1	0.9
44725	54.6	-39.0	P	739	0	0	0.8	0.5	1.0
44727	42.3	-24.4	P	713	0	1	0.5	-0.4	0.7
44728	51.9	-22.9	P	730	0	1	0.7	0.4	0.8
44729	44.3	-61.7	P	741	0	1	0.9	-1.0	1.3
44730	59.6	-38.4	P	749	0	2	0.8	0.1	0.9
44742	53.4	-47.5	P	743	0	1	0.8	-0.2	0.8
44743	33.9	-7.4	P	461	0	2	0.5	0.3	0.6
44745	38.1	-36.7	P	746	0	1	0.5	0.2	0.6
44746	39.7	-47.9	P	802	0	17	0.7	0.7	1.0
44747	40.0	-37.2	P	741	0	1	0.6	0.0	0.6
44760	49.4	-45.4	P	728	0	1	0.8	0.3	0.9
44761	50.9	-44.0	P	734	0	1	0.8	-0.1	0.8
44762	54.3	-40.2	P	511	0	0	0.9	-0.1	0.9
44763	51.9	-44.9	P	487	0	0	0.8	-0.3	0.8
44764	48.3	-47.7	P	464	0	0	0.7	0.1	0.7
44831	58.5	-13.3	P	877	0	17	1.0	-0.2	1.0
44832	58.0	-12.9	P	873	0	16	0.8	-0.3	0.9
44842	63.3	-20.3	P	872	0	16	0.9	-0.3	1.0
44843	64.4	-23.7	P	481	7	30	2.8	-0.5	2.9
44844	62.8	-10.6	P	877	0	17	1.0	-0.1	1.1
44845	50.3	-29.5	P	856	0	15	1.0	-0.2	1.0
44846	45.3	-17.5	P	847	0	14	0.4	0.1	0.5
44847	40.7	-23.6	P	883	0	18	0.6	-0.1	0.6
44848	39.7	-37.4	P	851	0	14	0.7	0.1	0.7
44850	41.5	-18.4	P	829	0	12	0.5	0.0	0.5
44901	36.5	-43.0	P	824	0	12	0.7	0.2	0.7
44903	42.0	-48.6	P	855	0	14	0.7	0.4	0.8
47555	72.0	-73.1	P	1488	0	68	0.7	-0.1	0.8
62504	42.5	-12.7	P	917	0	21	1.4	-0.1	1.4
62506	46.6	-5.6	P	19	0	26	0.7	0.7	1.0

IDENTIFIER	LAT.	LONG.	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
62510	33.8	-27.2	P	739	0	1	0.5	0.0	0.5
62511	44.3	-7.9	P	703	0	2	0.4	0.8	0.9
62514	62.9	-41.6	P	710	0	0	1.2	0.7	1.4
62515	43.9	-4.2	P	740	0	1	0.4	-0.3	0.5
62556	24.5	-44.1	P	742	0	1	0.7	0.2	0.7
62557	24.4	-38.0	P	745	0	1	0.5	-0.1	0.5
62560	44.1	-26.7	P	1083	0	39	0.8	0.2	0.8
62562	50.3	-12.3	P	694	0	1	0.6	0.4	0.7
62564	36.4	-21.1	P	744	0	1	0.4	0.9	1.0
62567	35.2	-20.9	P	729	0	1	0.4	-0.3	0.5
62568	59.1	-9.8	P	745	0	2	0.7	0.5	0.9
62569	55.2	-27.8	P	737	0	1	0.8	0.7	1.1
62570	62.3	-21.3	P	713	2	5	1.4	-0.2	1.4
62571	45.6	-6.8	P	650	0	1	0.4	0.2	0.5
62572	43.0	-15.7	P	730	0	1	0.4	0.1	0.4
62909	44.8	-8.7	P	223	0	7	0.6	0.0	0.6
62934	47.0	-7.7	P	810	0	13	0.4	0.0	0.4
62935	41.5	-20.2	P	829	0	13	0.5	0.0	0.5
62936	51.1	-8.3	P	712	0	15	0.4	0.2	0.5
64612	61.1	-15.8	P	371	0	13	2.1	0.8	2.2
64613	63.7	-27.1	P	740	0	1	0.9	0.1	0.9
64614	63.3	-19.3	P	740	0	1	0.8	0.2	0.8
64615	60.3	-32.0	P	518	0	0	0.9	0.0	0.9
64929	63.3	-7.0	P	866	0	17	0.9	0.1	0.9

IDENTIFIER	LAT.	LONG.	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
41525	25.2	-73.6	SPEED	745	0	100	2.2	-0.3	2.2
41543	29.3	-51.5	SPEED	762	0	100	2.0	-3.4	3.9
41630	28.3	-72.4	SPEED	747	0	100	2.4	0.1	2.4
41643	24.9	-73.8	SPEED	729	0	100	2.1	-0.4	2.1
41645	30.0	-68.6	SPEED	1006	0	100	2.7	0.8	2.8
41646	27.7	-78.3	SPEED	689	0	100	2.6	0.8	2.7
41931	40.7	-47.8	SPEED	5	60	100	5.6	3.2	6.5
41939	38.7	-44.5	SPEED	9	78	100	3.7	17.5	17.9
62571	45.6	-6.8	SPEED	354	0	100	2.0	2.9	3.5

IDENTIFIER	LAT.	LONG.	ELEM	NOBS	PGE	%REJ	SD	BIAS	RMS
41525	25.2	-73.6	DIRN.	530	0	0	16.1	6.4	17.3
41543	29.3	-51.5	DIRN.	139	0	0	19.5	2.4	19.6
41630	28.3	-72.4	DIRN.	523	0	0	16.1	6.0	17.2
41643	24.9	-73.8	DIRN.	523	0	0	17.7	18.3	25.4
41645	30.0	-68.6	DIRN.	674	0	0	14.2	12.2	18.7
41646	27.7	-78.3	DIRN.	485	0	0	13.1	0.6	13.1
41931	40.7	-47.8	DIRN.	5	60	0	27.3	34.9	44.3
41939	38.7	-44.5	DIRN.	9	78	0	19.4	45.6	49.6
62571	45.6	-6.8	DIRN.	275	0	0	16.5	0.3	16.6

TABLE 9

MONTHLY MONITORING OF AIRCRAFT OBSERVATIONS (COSNA)
MONITORING CENTRE: EXETER
MONTH: Jan 06

Monitoring procedures:

Period :One calendar month.

Data monitored :Statistics for each airline carrier.

Area monitored :40°N - 70°N, 60°W - 0°W.

Standard of comparison :Background field from UKMO global model.

Observation times :All hours combined.

Level(s) monitored :300.0 - 150.0 hPa

Elements monitored :TEMP in °C ; WIND in m s^{-1}

Parameters monitored :N REP. :Number of observations received excluding duplicates.

:PG :Percentage of observations with gross errors.

:PR :Percentage of observations rejected by quality control including rejections from the duplicate check.

:PC :Percentage of observations with calm winds.

:RMS :Root Mean Square difference of observations from background values excluding those with gross errors in Temperature & vector wind.

:BIAS :Mean difference of observations from background values excluding those with gross errors in Temperature & vector wind.

GROSS ERROR LIMITS :10.0 °C ; 60 m s^{-1} Vector Wind

SELECTION CRITERIA :N REP ≥ 20

NB: All American ACARS data are grouped together and statistics are shown at the bottom of the table as "US ACARS". All ADS reports are similarly grouped together.

	TEMPERATURE					WIND					
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
AAL	4560	0	5	1.3	0.2	4242	0	5	0	5.0	0.9
ACA	1992	0	4	1.4	-0.3	1633	0	3	0	5.2	0.8
ACF	51	6	51	3.7	-1.2	23	0	48	0	23.1	-4.2
AEA	312	1	4	1.8	0.8	282	2	5	0	8.8	-0.5
AFL	351	1	7	2.0	0.1	147	1	14	0	14.1	0.2
AFR	4281	0	3	1.4	0.2	4199	0	3	0	6.1	0.7
AFZ	48	0	17	1.7	1.3	48	0	17	0	4.0	0.0
AJM	143	1	15	2.2	0.0	113	0	65	0	13.9	0.3
AMT	92	1	2	1.5	0.6	84	0	2	0	8.0	-0.4
AMX	345	1	6	2.0	0.3	292	0	7	0	10.6	-0.2
ANZ	154	0	29	1.3	-0.2	142	0	30	0	4.8	0.6
AUA	357	0	3	1.3	0.4	352	0	3	0	5.5	0.8
AVA	61	0	10	2.1	0.1	61	3	7	0	9.6	-1.0
AZA	206	1	100	2.3	1.1	135	2	9	0	10.0	-0.2
BAL	229	0	12	1.8	0.2	217	0	15	0	8.7	0.7
BAW	580	0	13	1.8	-0.2	388	0	7	0	7.1	0.8
BHP	48	4	17	1.5	-0.2	34	0	9	0	6.0	1.0
BMA	353	0	3	1.3	-0.2	349	0	3	0	4.1	0.6
BPA	363	1	100	2.7	1.1	318	1	17	0	12.1	0.3
BWA	172	2	12	2.5	-0.5	122	1	6	0	8.1	0.8
CFC	27	4	15	1.5	0.5	26	0	12	0	7.6	0.2
CFG	478	0	14	2.0	0.3	325	1	16	0	14.1	0.3
CFY	40	0	0	1.2	-0.6	40	0	0	0	4.6	0.4
CGF	331	0	1	1.4	-0.4	328	0	1	0	4.2	1.0
CGH	341	0	2	1.2	-0.3	339	0	1	0	4.2	0.7
CKS	110	0	4	2.0	0.2	41	2	24	0	14.6	0.8
CLX	157	0	5	1.8	-0.4	67	0	76	0	12.8	-0.1
CNJ	40	0	33	1.1	0.6	40	0	33	0	4.6	-0.1
COA	4727	0	7	1.4	0.1	4626	0	7	0	5.1	0.7
CRL	150	1	13	2.2	0.0	132	0	14	0	13.2	-0.3
CUB	125	0	9	2.5	-0.4	90	1	100	0	11.7	0.8
DAB	654	0	5	1.3	-0.1	644	0	5	0	4.6	0.2
DAI	715	0	7	1.2	0.3	701	0	7	0	4.5	0.9
DAL	1100	0	7	1.4	0.2	1002	0	6	0	5.1	0.9
DLH	3548	0	5	1.3	0.1	3473	0	5	0	4.8	0.6
DRD	94	1	6	2.3	-0.1	94	1	1	0	5.7	1.1
EDW	39	0	23	2.6	-0.3	27	0	33	0	19.1	3.0
EEZ	80	1	15	2.3	0.5	74	0	5	0	6.0	0.8
EIA	139	1	81	1.8	-0.2	124	2	100	0	26.0	5.0
ELY	476	0	3	1.4	0.3	442	0	3	0	6.2	0.6
ESS	153	2	100	2.8	1.3	41	0	10	0	5.2	0.8
FCA	100	2	100	3.0	1.0	54	0	15	0	12.0	0.8
FDX	354	1	43	2.0	0.1	192	1	36	0	7.1	0.3
FGI	238	0	2	1.2	-0.4	230	0	3	0	5.4	0.6
FGL	149	0	4	1.1	0.2	147	0	4	0	4.7	0.6
FGN	45	0	4	1.1	0.4	44	0	2	0	4.3	0.8
FGS	525	0	3	1.4	0.2	518	0	3	0	4.6	0.9
FGZ	49	0	12	1.0	0.0	48	0	13	0	4.2	0.3
FIN	222	0	4	1.5	0.2	159	1	3	0	6.2	-0.3
FWI	188	2	23	2.1	-0.5	173	0	16	0	10.8	0.7
GCO	105	0	6	1.8	0.3	101	1	100	0	12.6	1.0
GEC	275	0	23	1.6	0.1	257	1	25	0	9.3	0.5
GOJ	52	0	8	1.6	0.2	51	0	4	0	5.4	1.6
GRL	53	2	2	1.1	0.4	49	0	2	0	6.0	1.1
GTI	123	0	11	2.1	0.5	95	1	12	0	12.5	-1.0
GVA	66	0	6	1.0	-0.2	64	0	5	0	4.8	0.5
GVB	68	0	7	1.0	0.0	67	0	7	0	4.6	0.1
GVF	67	0	3	1.3	-0.4	66	0	3	0	5.1	1.1
GVG	47	0	4	1.7	-0.9	46	0	4	0	6.8	1.6

		TEMPERATURE						WIND			
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
GVH	34	0	0	1.3	-0.2	33	0	0	0	5.8	1.5
GVL	40	0	3	1.2	-0.1	39	0	3	0	5.0	1.4
GVR	175	0	2	1.3	-0.3	170	0	2	0	4.7	0.4
GVT	40	0	0	1.3	-0.2	40	0	0	0	4.2	0.5
GVW	51	0	0	1.4	-0.4	51	0	0	0	4.5	0.3
GVX	67	0	1	1.0	0.2	66	0	2	0	4.2	1.2
GWW	151	0	4	1.2	-0.4	149	0	3	0	4.0	0.6
HBI	184	0	4	1.4	-0.4	180	0	4	0	4.7	0.9
HBJ	115	0	3	1.2	-0.3	111	0	4	0	4.1	1.0
IBE	1244	1	5	1.7	0.2	1211	1	5	0	8.5	0.4
ICE	634	1	8	2.4	0.6	284	0	1	0	5.7	0.4
ISR	52	0	4	1.2	-0.1	28	0	11	0	12.8	0.3
IWD	119	1	4	2.0	-0.7	119	0	3	0	6.0	-0.1
KAC	89	0	2	1.4	0.5	88	0	0	0	4.5	0.6
KLM	909	1	8	1.9	0.0	589	1	10	0	11.8	0.8
LCO	25	0	4	1.3	-0.1	23	0	9	0	14.0	-0.4
LNR	292	0	51	1.3	-0.3	288	0	51	0	4.0	0.4
LOT	255	2	6	2.0	-0.9	113	3	8	0	9.2	-0.9
LTU	590	1	8	2.1	0.0	393	0	8	0	8.5	0.9
LVG	186	1	12	2.1	0.0	156	2	12	0	9.3	1.5
MAS	63	0	6	1.7	-0.5	53	0	4	0	5.7	2.0
MON	43	2	5	1.7	0.4	31	0	6	0	9.8	-0.1
MPD	137	0	0	1.5	0.7	127	0	2	0	7.5	-0.2
MPH	206	0	7	1.9	-1.1	126	1	13	0	12.3	-1.4
MSR	104	0	0	1.1	0.5	103	0	1	0	4.3	0.7
MXJ	215	1	11	1.7	-0.1	119	0	3	0	5.8	1.1
MYT	85	1	12	2.0	-0.5	64	2	16	0	12.3	-0.1
NAO	43	0	2	1.5	-0.3	28	0	0	0	6.1	0.5
NOS	103	1	17	2.1	0.9	75	3	19	0	12.4	0.4
NWA	1943	0	3	1.5	-0.1	1868	0	2	0	5.2	0.7
OAE	238	0	17	2.1	-0.1	98	0	26	0	13.0	2.5
OOM	83	2	8	2.4	0.4	60	0	2	0	5.4	-0.6
OYK	345	0	55	1.2	-0.1	340	0	56	0	4.5	0.6
PAC	52	0	4	1.6	0.3	34	0	0	0	6.7	2.0
PLM	96	0	2	2.0	1.0	91	2	7	0	7.9	0.2
RAM	262	0	6	1.9	0.3	181	1	9	0	10.1	-0.8
RCH	313	3	100	3.8	-0.8	224	1	100	0	10.7	0.6
RJA	42	2	7	1.1	-0.2	23	0	4	0	5.8	1.0
RZO	172	0	3	1.6	-0.4	155	0	5	0	7.0	1.2
SAS	870	0	61	1.2	-0.1	856	0	61	0	4.2	0.9
SER	509	0	48	1.4	0.1	494	0	48	0	4.3	0.4
SEU	268	3	26	2.4	-0.3	211	2	28	0	15.8	1.3
SIA	373	0	0	1.4	0.2	371	0	0	0	4.8	0.5
SLM	28	0	4	0.9	0.6	28	0	7	0	10.3	-0.9
SQC	304	0	1	1.4	0.0	302	0	1	0	4.9	0.1
SWR	1501	0	3	1.3	-0.3	1490	0	3	0	5.1	1.0
TAP	285	1	1	1.1	-0.3	221	0	4	0	8.1	0.1
TCX	242	0	5	1.2	0.3	239	0	5	0	5.1	0.9
TFL	83	0	6	1.9	-0.2	60	0	7	0	7.9	0.0
THT	78	0	0	1.3	-0.5	78	0	0	0	3.8	0.8
TSC	48	2	8	1.8	-0.3	29	0	7	0	7.6	0.4
TSO	39	28	46	3.9	0.7	36	0	28	0	17.1	-2.8
UAE	336	0	3	1.4	0.5	328	0	3	0	4.8	1.2
UAL	3722	0	5	1.3	-0.1	3680	0	5	0	4.8	0.7
UPS	931	1	50	1.8	-0.2	506	0	50	0	6.7	0.6
USA	1583	0	3	1.2	0.0	1543	0	3	0	4.9	0.8
VIR	2373	0	2	1.2	-0.2	2281	0	1	0	4.8	0.6
VLE	25	0	28	3.4	-0.5	21	0	19	0	8.8	0.3
WOA	257	2	10	1.7	0.2	185	1	9	0	9.5	0.6

		TEMPERATURE						WIND			
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
XLA	43	2	14	3.1	1.7	33	0	9	0	10.8	0.6
ZKN	85	0	1	1.2	-0.1	83	0	1	0	4.5	0.2
ZKS	101	0	2	1.0	0.0	100	0	2	0	4.4	0.3
4XE	27	0	0	1.1	0.5	27	0	0	0	4.4	1.0
9VS	91	0	2	1.2	0.2	91	0	2	0	4.3	-0.1

		TEMPERATURE						WIND			
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
EU	36624	0	23	1.2	0.2	36624	0	23	0	4.4	0.4

		TEMPERATURE						WIND			
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
N	5300	0	13	1.3	-0.1	5110	0	13	0	4.7	0.6
S	38	0	0	1.2	0.3	38	0	0	0	5.8	0.2

		TEMPERATURE						WIND			
IDENT.	N.REP.	PG	PR	RMS	BIAS	N.REP.	PG	PR	PC	RMS	BIAS
US AMDAR	34729	0	29	1.3	0.3	34729	0	26	0	4.9	0.3

TABLE 10

MONTHLY MONITORING OF RADIOSONDE OBSERVATIONS (COSNA)
MONITORING CENTRE: EXETER
MONTH: Jan 06

Monitoring procedures

Period		:One calendar month.
Data monitored		:Reports from selected radiosonde TEMPs.
Area monitored		:0°N - 90°N, 100°W - 40°E
Standard of comparison		:Background field from UKMO global model.
Position		:Average latitude and longitude for period.
Observation times		:00, 12 UTC.
Level monitored		:100 hPa.
Element monitored		:GEOPOTENTIAL HEIGHT in metres
Parameters monitored	:NUM OBS	:Number of observations available at level shown during period.
	:NUM GROSS	:Number of gross errors at level shown during period.
	:SD	:SD of difference of observations from background values at level shown excluding those with gross errors.
	:BIAS	:Mean difference of observations from background values at level shown excluding those with gross errors.

GROSS ERROR LIMITS :Defined in Appendix I.1

WMO IDENT	OBS TIME	ELM	LEV	NUM OBS	NUM GROSS	SD	RMS	BIAS
EBUQ	12	Z	100	9	2	20.4	27.2	18.0
ELML7	00	Z	100	9	0	13.9	25.1	20.9
ELML7	12	Z	100	8	0	11.3	26.4	23.9
FQFL	00	Z	100	6	0	14.3	19.7	13.5
FQFL	12	Z	100	5	0	19.0	20.8	8.4
FQFM	00	Z	100	9	0	11.9	13.2	-5.7
FQFM	12	Z	100	4	0	6.9	12.5	-10.5
HPII	00	Z	100	4	0	18.3	22.2	-12.5
HPII	12	Z	100	6	0	39.0	41.4	-13.8
KRPD	00	Z	100	7	0	4.6	12.9	12.0
KRPD	12	Z	100	11	0	12.7	26.4	23.2
LDWR	00	Z	100	30	0	8.8	10.3	-5.4
LDWR	12	Z	100	29	0	10.1	12.0	-6.5
OXGN2	00	Z	100	8	0	12.9	19.9	-15.1
OXGN2	12	Z	100	9	0	14.4	24.0	-19.2
OXTS2	00	Z	100	3	0	3.8	4.6	2.7
OXTS2	12	Z	100	5	0	9.4	9.9	3.2
SKUN	00	Z	100	6	0	14.7	45.3	42.8
SKUN	12	Z	100	10	0	15.4	31.3	27.2
V2BD9	00	Z	100	7	0	11.1	14.4	9.3
V2BD9	12	Z	100	3	0	12.5	12.5	-0.7
V2XM	00	Z	100	4	0	13.9	14.8	-5.3
V2XM	12	Z	100	6	0	12.0	13.4	6.0
WAAH	00	Z	100	7	1	13.3	50.5	48.7
WAAH	12	Z	100	8	0	13.6	58.6	57.0
WPKD	00	Z	100	5	0	7.3	13.9	11.8
WPKD	12	Z	100	11	0	42.2	42.5	4.9
ZCBE7	00	Z	100	1	0	0.0	41.0	41.0
ZCBE7	12	Z	100	2	0	12.5	37.6	35.5
ZCBF3	00	Z	100	4	0	23.9	41.6	34.0
ZCBF3	12	Z	100	6	0	15.7	29.3	24.7
ZCBP6	00	Z	100	4	0	19.0	31.4	25.0
ZCBP6	12	Z	100	5	0	10.7	21.8	19.0
03953	00	Z	100	27	0	11.9	12.2	2.7
03953	12	Z	100	30	0	15.9	16.9	5.8
04018	00	Z	100	25	0	12.3	15.3	-9.2
04018	12	Z	100	25	1	13.1	16.4	-9.8
04220	00	Z	100	29	0	6.7	8.8	5.8
04220	12	Z	100	30	0	11.1	12.5	5.7
04270	00	Z	100	27	0	17.9	17.9	0.4
04270	12	Z	100	29	0	17.6	18.1	-4.5
04339	00	Z	100	30	0	17.3	17.5	2.2
04339	12	Z	100	29	0	30.0	30.1	-2.2
04360	00	Z	100	28	0	14.2	15.0	4.6
04360	12	Z	100	28	0	13.6	14.2	3.9
08001	00	Z	100	24	0	14.8	22.2	16.6
08001	12	Z	100	27	0	29.3	35.7	20.5
08508	00	Z	100	30	0	14.2	22.1	17.0
08508	12	Z	100	30	0	11.3	25.6	23.0
08522	12	Z	100	25	0	14.6	18.5	11.4
08594	12	Z	100	20	0	10.0	10.0	0.1
71600	00	Z	100	30	0	14.8	17.5	-9.3
71600	12	Z	100	31	0	16.2	18.9	-9.8
72201	00	Z	100	30	0	8.1	9.7	5.3
72201	12	Z	100	31	0	10.5	10.9	2.7
72402	00	Z	100	29	0	12.3	23.7	20.3
72402	12	Z	100	30	0	10.9	11.1	1.9
74494	00	Z	100	27	0	12.7	14.4	-6.7
74494	12	Z	100	29	0	15.2	23.8	-18.3
78016	00	Z	100	28	0	13.7	25.6	21.6
78016	12	Z	100	30	1	12.5	24.3	20.8

TABLE 11

MONTHLY MONITORING OF RADIOSONDE OBSERVATIONS (COSNA)
MONITORING CENTRE: EXETER
MONTH: Jan 06

Monitoring procedures:

Period :One calendar month.

Data monitored :Reports from selected radiosonde TEMPs.

Area monitored :0°N - 90°N, 100°W - 40°E

Standard of comparison :Background field from UKMO global model.

Position :Average latitude and longitude for period.

Observation times :00, 12 UTC.

Level monitored :500 hPa.

Element monitored :GEOPOTENTIAL HEIGHT in metres

Parameters monitored :NUM OBS :Number of observations available at level shown during period.

:NUM GROSS :Number of gross errors at level shown during period.

:SD :SD of difference of observations from background values at level shown excluding those with gross errors.

:BIAS :Mean difference of observations from background values at level shown excluding those with gross errors.

GROSS ERROR LIMITS :Defined in Appendix I.1

WMO IDENT	OBS TIME	ELM	LEV	NUM OBS	NUM GROSS	SD	RMS	BIAS
EBUQ	12	Z	500	17	1	10.2	10.2	-0.9
ELML7	00	Z	500	9	0	9.4	9.5	0.7
ELML7	12	Z	500	9	0	10.0	10.0	0.7
FQFL	00	Z	500	7	0	4.9	7.8	-6.1
FQFL	12	Z	500	7	0	11.3	15.0	-9.9
FQFM	00	Z	500	11	0	5.8	17.6	-16.6
FQFM	12	Z	500	7	0	12.5	18.7	-14.0
HPII	00	Z	500	7	0	4.6	16.9	-16.3
HPII	12	Z	500	8	0	11.1	19.9	-16.5
KRPD	00	Z	500	7	0	8.3	8.9	-3.3
KRPD	12	Z	500	11	0	8.0	8.1	-1.2
LDWR	00	Z	500	30	0	9.2	9.4	-2.0
LDWR	12	Z	500	30	0	10.3	10.3	0.8
OXGN2	00	Z	500	8	0	9.5	10.0	-3.3
OXGN2	12	Z	500	9	0	7.1	7.1	0.8
OXTS2	00	Z	500	4	0	6.2	20.2	19.3
OXTS2	12	Z	500	6	0	5.3	14.0	13.0
SKUN	00	Z	500	6	0	6.4	28.7	28.0
SKUN	12	Z	500	10	0	12.0	21.2	17.5
V2BD9	00	Z	500	7	0	5.4	15.9	-15.0
V2BD9	12	Z	500	4	0	7.8	17.6	-15.8
V2XM	00	Z	500	4	0	9.6	16.3	13.3
V2XM	12	Z	500	6	0	11.0	18.6	15.0
WAAH	00	Z	500	9	0	7.4	30.4	29.4
WAAH	12	Z	500	9	0	11.0	26.9	24.6
WPKD	00	Z	500	10	0	11.5	16.8	-12.2
WPKD	12	Z	500	11	1	22.3	27.4	-15.8
ZCBE7	00	Z	500	1	0	0.0	11.0	11.0
ZCBE7	12	Z	500	2	0	8.5	15.1	12.5
ZCBF3	00	Z	500	4	0	11.1	21.2	18.0
ZCBF3	12	Z	500	6	0	11.0	12.0	4.7
ZCBP6	00	Z	500	5	0	5.4	19.9	19.2
ZCBP6	12	Z	500	5	0	5.1	32.4	32.0
03953	00	Z	500	28	0	6.6	7.0	-2.5
03953	12	Z	500	31	0	7.1	7.3	-1.9
04018	00	Z	500	25	0	9.7	9.8	-1.0
04018	12	Z	500	25	1	7.3	7.8	-2.9
04220	00	Z	500	29	0	6.7	6.7	0.7
04220	12	Z	500	30	0	6.8	7.1	-1.8
04270	00	Z	500	28	0	7.9	7.9	0.7
04270	12	Z	500	29	0	8.5	8.7	-1.7
04339	00	Z	500	30	0	8.8	8.9	1.1
04339	12	Z	500	29	0	12.7	12.7	-0.4
04360	00	Z	500	29	0	10.1	10.1	0.1
04360	12	Z	500	28	0	11.5	11.8	-2.2
08001	00	Z	500	27	0	7.0	7.0	0.3
08001	12	Z	500	31	0	8.2	8.9	3.5
08508	00	Z	500	30	0	8.1	12.7	-9.8
08508	12	Z	500	31	0	9.8	11.2	-5.5
08522	12	Z	500	25	0	4.9	9.1	-7.7
08594	12	Z	500	21	0	5.3	5.4	-1.4
71600	00	Z	500	30	0	8.4	11.1	-7.3
71600	12	Z	500	31	0	9.3	12.8	-8.7
72201	00	Z	500	30	0	4.6	7.4	-5.8
72201	12	Z	500	31	0	4.4	11.0	-10.0
72402	00	Z	500	29	0	6.9	7.1	1.6
72402	12	Z	500	30	0	5.8	6.2	-2.1
74494	00	Z	500	27	0	8.3	9.3	-4.0
74494	12	Z	500	29	0	7.6	9.8	-6.1
78016	00	Z	500	28	0	5.5	6.7	3.9
78016	12	Z	500	30	1	7.0	7.1	0.6

TABLE 12

MONTHLY MONITORING OF RADIOSONDE OBSERVATIONS (COSNA)
MONITORING CENTRE: EXETER
MONTH: Jan 06

Monitoring procedures

Period		:One calendar month.
Data monitored		:Reports from selected radiosonde TEMPs.
Area monitored		:0°N - 90°N, 100°W - 40°E
Standard of comparison		:Background field from UKMO global model.
Position		:Average latitude and longitude for period.
Observation times		:00, 12 UTC.
Level monitored		:100 hPa.
Element monitored		:VECTOR WIND in m s^{-1}
Parameters monitored	:NUM OBS	:Number of observations available at level shown during period.
	:NUM GROSS	:Number of gross errors at level shown during period.
	:UBIAS,VBIAS	:Mean difference of observations of U and V components from background values at level shown excluding those with gross errors.
	:RMS	:Root Mean Square difference of observations from background values at level shown excluding those with gross errors.

GROSS ERROR LIMITS :Defined in Appendix I.2

WMO IDENT	OBS TIME	ELM	LEV	NUM OBS	NUM GROSS	% REJ	RMS	UBIAS	VBIAS
EBUQ	12	V	100	11	0	27	11.4	-2.9	2.2
ELML7	00	V	100	10	0	0	4.9	0.7	-1.1
ELML7	12	V	100	8	0	0	3.7	-0.2	0.7
FQFL	00	V	100	7	0	0	4.0	-0.8	-0.8
FQFL	12	V	100	5	0	0	4.7	-1.7	1.2
FQFM	00	V	100	9	0	0	5.8	-1.6	0.5
FQFM	12	V	100	4	0	0	2.5	0.6	-0.9
HPII	00	V	100	4	0	0	3.4	0.1	0.8
HPII	12	V	100	6	0	0	4.9	-0.9	1.1
KRPD	00	V	100	7	0	0	3.7	0.6	-1.0
KRPD	12	V	100	11	0	0	4.2	-0.1	0.9
LDWR	00	V	100	30	0	0	3.7	0.3	-0.5
LDWR	12	V	100	29	0	0	2.5	0.0	-0.3
OXGN2	00	V	100	6	0	0	5.0	1.2	-2.0
OXGN2	12	V	100	6	0	0	4.5	2.3	0.6
OXTS2	00	V	100	3	0	0	7.6	-2.1	-4.6
OXTS2	12	V	100	4	0	0	4.9	0.8	-2.7
SKUN	00	V	100	6	0	0	7.7	5.5	-1.1
SKUN	12	V	100	9	0	11	7.1	-2.9	0.7
V2BD9	00	V	100	7	0	0	5.3	-2.0	-1.4
V2BD9	12	V	100	3	0	0	2.8	-0.3	0.3
V2XM	00	V	100	4	0	0	4.1	-1.1	1.8
V2XM	12	V	100	5	0	0	2.6	0.6	0.4
WAAH	00	V	100	7	0	0	4.5	-0.7	1.1
WAAH	12	V	100	7	0	0	4.4	-1.3	0.1
WPKD	00	V	100	5	0	0	2.2	-0.9	0.2
WPKD	12	V	100	11	0	9	5.1	1.6	-0.8
ZCBF3	00	V	100	4	0	0	5.2	2.7	-3.1
ZCBF3	12	V	100	6	0	0	6.5	-1.3	1.4
ZCBP6	00	V	100	4	0	0	6.0	-0.2	-3.6
ZCBP6	12	V	100	5	0	0	3.6	0.7	-0.8
03953	00	V	100	26	0	0	3.1	0.1	-0.5
03953	12	V	100	28	0	0	3.3	-0.2	0.8
04018	00	V	100	25	0	0	4.1	-0.3	-0.2
04018	12	V	100	26	0	0	3.7	0.1	0.7
04220	00	V	100	29	0	0	3.4	0.7	0.5
04220	12	V	100	30	0	0	2.3	0.5	0.0
04270	00	V	100	27	0	3	5.9	-1.0	0.4
04270	12	V	100	29	0	0	4.4	-0.7	0.9
04339	00	V	100	29	0	13	10.5	-0.7	0.2
04339	12	V	100	27	0	3	5.7	-0.2	1.1
04360	00	V	100	27	0	0	3.8	0.2	0.0
04360	12	V	100	25	0	0	3.5	0.0	-0.2
08001	00	V	100	22	0	0	4.1	1.1	-1.5
08001	12	V	100	24	0	0	4.4	0.8	0.7
08508	00	V	100	14	0	0	5.4	-1.3	1.2
08508	12	V	100	13	0	0	4.7	-0.5	0.7
08522	12	V	100	24	0	0	4.6	0.7	0.9
08594	12	V	100	20	0	100	6.0	-0.6	-3.1
71600	00	V	100	27	0	0	3.7	0.3	0.7
71600	12	V	100	31	0	0	4.0	-0.2	1.0
72201	00	V	100	30	0	0	4.4	1.0	1.5
72201	12	V	100	30	0	0	4.0	0.5	0.4
72402	00	V	100	29	0	0	4.4	-0.2	-0.8
72402	12	V	100	31	0	0	4.5	-0.5	-0.3
74494	00	V	100	25	0	44	3.1	-0.8	0.6
74494	12	V	100	26	0	50	3.6	-1.7	0.4
78016	00	V	100	28	0	0	4.7	0.2	-0.3
78016	12	V	100	30	0	0	5.1	0.7	0.3

TABLE 13

MONTHLY MONITORING OF RADIOSONDE OBSERVATIONS (COSNA)
MONITORING CENTRE: EXETER
MONTH: Jan 06

Monitoring procedures

Period :One calendar month.

Data monitored :Reports from selected radiosonde TEMPs.

Area monitored :0°N - 90°N, 100°W - 40°E

Standard of comparison :Background field from UKMO global model.

Position :Average latitude and longitude for period.

Observation times :00, 12 UTC.

Level monitored :500 hPa.

Element monitored :VECTOR WIND in m s^{-1}

Parameters monitored :NUM OBS :Number of observations available at level shown during period.

:NUM GROSS :Number of gross errors at level shown during period.

:UBIAS,VBIAS: Mean difference of observations of U and V components from background values at level shown excluding those with gross errors.

:RMS :Root Mean Square difference of observations from background values at level shown excluding those with gross errors.

GROSS ERROR LIMITS :Defined in Appendix I.2

WMO IDENT	OBS TIME	ELM	LEV	NUM OBS	NUM GROSS	% REJ	RMS	UBIAS	VBIAS
EBUQ	12	V	500	15	0	0	4.1	1.0	1.5
ELML7	00	V	500	10	0	0	3.2	0.0	0.4
ELML7	12	V	500	9	0	0	4.5	-1.0	0.9
FQFL	00	V	500	8	0	0	3.3	0.0	0.7
FQFL	12	V	500	7	0	0	3.4	-0.2	1.4
FQFM	00	V	500	11	0	0	3.5	0.8	1.0
FQFM	12	V	500	7	0	0	2.5	0.3	-1.7
HPII	00	V	500	7	0	0	3.5	-0.8	0.1
HPII	12	V	500	8	0	0	5.0	-2.1	0.7
KRPD	00	V	500	7	0	0	2.6	-0.1	0.4
KRPD	12	V	500	11	0	0	2.4	-0.1	1.3
LDWR	00	V	500	30	0	0	3.3	-0.1	0.1
LDWR	12	V	500	30	0	0	3.7	-0.2	0.4
OXGN2	00	V	500	7	0	0	6.4	-1.5	-0.5
OXGN2	12	V	500	8	0	0	6.2	-1.1	-0.3
OXTS2	00	V	500	4	0	0	5.7	0.8	-2.0
OXTS2	12	V	500	6	0	0	3.4	0.2	-1.2
SKUN	00	V	500	6	0	0	4.7	2.3	-1.8
SKUN	12	V	500	10	0	0	4.4	-0.5	0.5
V2BD9	00	V	500	7	0	0	4.5	-0.2	0.0
V2BD9	12	V	500	4	0	0	4.8	2.3	-2.4
V2XM	00	V	500	4	0	0	4.7	-1.4	2.4
V2XM	12	V	500	5	0	0	4.9	1.7	-3.0
WAAH	00	V	500	9	0	0	3.2	-0.4	-0.3
WAAH	12	V	500	9	0	0	4.0	-1.6	1.2
WPKD	00	V	500	9	0	0	3.2	-1.5	1.4
WPKD	12	V	500	12	0	0	5.2	-1.4	1.2
ZCBF3	00	V	500	4	0	0	2.3	-0.5	-1.0
ZCBF3	12	V	500	6	0	0	3.4	-1.5	0.0
ZCBP6	00	V	500	4	0	0	4.7	-1.0	0.4
ZCBP6	12	V	500	5	0	0	3.0	0.2	-0.1
03953	00	V	500	28	0	0	3.9	-0.8	0.4
03953	12	V	500	31	0	0	4.3	0.6	-0.5
04018	00	V	500	25	0	0	4.5	0.1	-0.7
04018	12	V	500	26	0	0	4.3	-0.6	-0.1
04220	00	V	500	28	0	0	3.4	0.0	-1.0
04220	12	V	500	30	0	0	2.7	0.0	0.2
04270	00	V	500	28	0	0	4.2	0.8	-0.9
04270	12	V	500	29	0	0	4.6	0.1	0.4
04339	00	V	500	29	0	3	5.6	0.8	0.0
04339	12	V	500	28	0	3	6.1	1.2	0.5
04360	00	V	500	28	0	0	5.8	0.2	-0.5
04360	12	V	500	28	0	0	5.9	0.2	2.0
08001	00	V	500	27	0	0	4.2	0.4	-0.2
08001	12	V	500	27	0	0	3.4	-1.0	-1.8
08508	00	V	500	14	0	0	3.6	-1.3	0.1
08508	12	V	500	13	0	0	3.8	-1.0	0.1
08522	12	V	500	25	0	0	3.9	-0.6	1.7
08594	12	V	500	20	0	10	6.0	0.9	-1.8
71600	00	V	500	30	0	0	4.8	0.0	-0.3
71600	12	V	500	31	0	0	4.2	-0.7	1.3
72201	00	V	500	30	0	0	2.5	-0.6	1.2
72201	12	V	500	29	1	0	2.8	0.0	0.0
72402	00	V	500	28	0	0	3.1	0.2	0.2
72402	12	V	500	31	0	0	4.2	0.7	0.3
74494	00	V	500	27	0	44	4.9	-1.6	0.8
74494	12	V	500	28	0	50	3.8	-0.1	-0.6
78016	00	V	500	28	0	0	3.7	-0.1	-0.3
78016	12	V	500	31	0	0	4.2	0.7	-0.1

APPENDIX I

1. The gross error limits for observation minus background differences of geopotential height in Tables 5, 10 and 11 are:-

Level (hPa)	Geopotential height (metres)
1000	100
850	100
700	100
500	150
400	175
300	200
250	225
200	250
150	275
100	300
70	375
50	400
30	450

The weighted RMS values used in Table 5,10 and 11 are calculated using the following weights:-

Level (hPa)	Weight
1000	3.70
850	3.40
700	2.90
500	2.20
400	1.90
300	1.60
250	1.50
200	1.37
150	1.19
100	1.00
70	0.87
50	0.80
30	0.64

2. The gross error limits for observation minus background differences of windspeed in Tables 6,12 and 13 are:-

Level (hPa)	Windspeed m s^{-1}
1000	35
850	35
700	40
500	45
400	50
300	60
250	60
200	50
150	50
100	45